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ABSTRACT

It has been postulated that young people are open to driving accidents because of age, lack of experience and risk-taking attitudes. The Young Driver Attitude Scale (YDAS) was developed to measure attitudes likely to influence driving practices. Over 200 items relating to the risk-taking attitudes of young people were shown to a small group of high school students who placed a check mark next to any unclear words or items. Results were given to a small group of experts and a group of 50 high school students. The evaluative mean for each item was calculated and the highest ranked among them comprised the 150-item YDAS. This was administered as Part One of a five-part battery to a sample of 403 high school students 15-16 years of age. With the reliability and concurrent validity of the 150-item YDAS established the number of items was reduced from 150 to 70. The intervention, which was applied in school and community settings to 420 student and community participants) included the YDAS, a film and film rating scale, evaluation forms, and, in the community setting, a mock driving while intoxicated arrest. The YDAS results were disappointing. Although the YDAS appeared to be a valid and reliable diagnostic instrument, it may not be suitable for pre- and post-application to measure change. (BHK)

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YOUNG DRIVER ATTITUDE SCALE: THE DEVELOPMENT AND FIELD-TESTING OF AN INSTRUMENT TO MEASURE YOUNG DRIVER RISK-TAKING ATTITUDES

James L. Malfetti, Ed.D.
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BACKGROUND AND ACKNOWLEDGMENTS

It has been well-documented that in proportion to their numbers, young drivers suffer more traffic accidents and fatalities than drivers of any other age group. One reason for this is found in their attitudes toward risk-taking. The purpose of this study, therefore, was to create a valid, reliable, and practicable instrument to measure these attitudes in young people just beginning to drive, or about to begin; and to explore potentially helpful intervention before harmful attitudes are acted out on the road.

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YOUNG DRIVER ATTITUDE SCALE:
THE DEVELOPMENT AND FIELD-TESTING OF AN INSTRUMENT
TO MEASURE YOUNG DRIVER RISK-TAKING ATTITUDES

Introduction

That young drivers suffer traffic accidents and fatalities out of proportion to their numbers has been well documented over the years (McKnight, 1987; DiBlasio, 1986; NHTSA FARS, 1986; Boyd, 1984; Grossman, 1984; Lawson et al., 1984). In fact, car accidents account for approximately half of all deaths to those aged 16 to 19 (Williams, Preusseur, Lund, & Rasmussen, 1987). Not only are they killing and maiming themselves, but teenagers are also involved disproportionately as drivers in accidents in which others are killed (Brown, Sanders, & Schonberg, 1986).

What can be done to stop the killing? Numerous suggestions have been made. Delaying the age for licensing (Insurance Institute for Highway Safety, 1981) was one which received some statistical support and considerable publicity. But various practical factors work against this approach. First, teenagers are highly motivated to drive. Three-fourths of 1,500 high school students said that automobiles were a very important part of their lives (George, 1984). Such motivation should be capitalized on to teach them at an early age to drive safely, and thereby keep their license. Delay or denial of one of the few adult prerogatives that positively excite them can prove damaging to their impression of the fairness of the driver-licensing system. They already query how legitimate it is to penalize the "good" with the "bad" just because "we are of a certain age."

Furthermore, as Yaksich (1982) has said, we are a mobile society that depends on private transportation for our existence. There is no public transportation for the vast majority of our people, including teenagers who work, play or go to school beyond walking distance from home. In the same article, Yaksich adds, "Those who...propose public policies to make parents do more carting of young people...have lost sight of reality." Equally important is that the increasing number of dual-career and single parent families creates more need to develop self-reliance in the young (McDonald, 1979)--including driving at an early age--to help them achieve their legitimate lifestyle needs which they otherwise would be denied.

Driver education represents a continuing effort to reduce young-driver accidents. While the high school program has been highly formalized over the years, and usually contains prescribed classroom and road-training experiences, controlled studies have shown little or no correlation between the program and a reduction in accidents and fatalities. Students have said that this lack of connection may be due to the program's lack of rigor, which in part is the result of what they

consider a major fault of the program--treating them all alike, without regard for the individual's knowledge, attitude, and experience (Basch, DeCicco, & Malfetti, 1987).

What, then, is worth trying? It has been postulated often that young people are open to accidents because of their age and lack of experience (Mausner & Bahn, 1974; DeCicco, 1987) and risk-taking attitudes (Jessor, 1984). In fact, risk-taking attitudes have been so frequently associated with the teenager's unfortunate plight (Cameron, 1982; Basch, DeCicco, & Malfetti, 1987) that it might be worth identifying and measuring teenage attitudes toward driving, and exploring ways they might be improved.

And that is exactly what this report is about. We have developed an instrument called the Young Driver Attitude Scale (YDAS) to measure attitudes likely to influence driving practices. In addition, we have done some limited exploration of ways to influence some of the faulty attitudes identified. Full details for these joint activities are found in Rose (1989) and DeKorp (1989). This report contains only the essentials of the steps taken in creating the YDAS and in the exploration of associated interventions.

Young Driver Attitude Scale

To start at the end, we believe we have created a valid and reliable instrument to measure the risk-taking attitudes of young or about-to-be drivers. This section presents the rationale for this belief.

Literature Review

An extensive review of the literature relating to the attitudes of young persons was undertaken. The review included such areas as:

- psychosocial aspects of development in teenagers (Oldham, 1978; Donovan & Jessor, 1985; Donovan, Jessor, & Jessor, 1983; Heron, 1987; Finn & Brown, 1981);
- risk taking (Finn & Brown, 1981);
- teenage driving behaviors (Farrow, 1987; DeCicco, 1987; Desmond, Price, & O'Connell, 1985; Williams, Preussner, Lund, & Rasmussen, 1987; Basch, DeCicco, & Malfetti, 1987); and
- research studies of young drivers (Simpson & Mayhew, 1987; Stondemeire, Wallack, & Hedemark, 1987; Finn & James, 1981; Jonah & Dawson, 1987; Cameron, 1982).

This review, coupled with transcripts of focus group discussions conducted with young drivers (Basch, DeCicco, & Malfetti, 1987), provided a pool for the writing of over 200 items relating to the risk-taking attitudes of young people.

Instrument Development

The items developed were shown to a small group of high school students who were asked to place a check mark next to any unclear words or items. Results were used to modify or eliminate items. Retained items were then placed in one of eight categories suggested by the literature as having a strong relationship to the risk-taking attitudes of young persons, categories which figured strongly in the transcripts of the focus group discussions mentioned above (Basch, DeCicco, & Malfetti, 1987): 1) seatbelts; 2) speeding; 3) safe driving; 4) drinking and driving; 5) concern for others; 6) riding with an unsafe driver; 7) myself; and 8) beer.

Three illustrative items taken from those retained in each of the above categories were then given to a small group of experts and to a group of 50 high school students (from Grover Cleveland High School in Queens, New York). They were asked to generate at least three additional items per category like the examples provided. This procedure resulted in an additional 500 items, many of which were redundant or inappropriate. The study team combined or eliminated overlapping or repetitive and unsuitable items, and arrived at a total of 320 items from all sources. These items with instructions (Appendix A) were then given to a group of five authorities for evaluation on a five position scale--a continuum from Not at all important to Very important. Evaluative means for each item were calculated, and the highest rated among them were retained for a 150-item YDAS, comprising 20 items in each of the eight categories indicated above, except for Beer, in which there were ten items. These 150 items were then given to the same five authorities for editing and comments (Appendix B), with the explanation that the items had been selected from the 320 items they had evaluated earlier, tempered by equitable distribution of content coverage and attitudinal caste of the items. Their comments were synthesized and used to prepare the final 150-item YDAS form.

The 150-item YDAS, created as described above, was administered (to the sample described later) as Part One (Appendix C) of a five-part battery. The instructions for this part of the instrument asked respondents to indicate the extent to which they agreed or disagreed with each item on a four-position Likert-type scale (Oppenheim, 1966): strongly agree, agree, disagree, strongly disagree. Items were intermingled in the eight categories, as shown in Appendix D.

Part Two of the battery (Appendix F) derives from the Semantic Differential Technique (Osgood, Succi, & Tannenbaum, 1957) and measures four semantic dimensions (evaluative, activity, potency, stability) with four bipolar adjective scales selected to reflect each (Appendix E), totalling sixteen seven-point scales. These scales were used to rate each of nine concepts (Appendix F) relating to driving: 1) riding with an unsafe driver; 2) seatbelts; 3) speeding; 4) drinking and driving; 5) concern for others; 6) myself; 7) beer; 8) self-confidence; and 9) safe driving. As can be seen, these concepts parallel the eight categories

for YDAS items and add self-confidence. This was one of two parts of the battery with established validity (DeCicco, 1957; Basch, DeCicco, & Malfetti, 1987), whose simultaneous administration with the 150-item YDAS was used as a check of validity.

Part Three (Appendix G) represents another validity check for the 150-item YDAS. Since it was not possible to follow YDAS respondents to determine if they acted out in ways their attitudinal answers suggested, six behavioral intention items were used as a surrogate measure. The six were taken from a previous study (Basch, DeCicco, & Malfetti, 1987) to form a future driving behavior composite score (DBC6). Two items were added to this part of the battery. They concerned self-rating as a driver and future outlook in general. It seemed to the study team that answers to these questions might relate to the risk-taking attitudes expressed in answers to YDAS items.

Part Four (Appendix H) was designed to gather sociodemographic information adequate to describe the sample, and to make possible the examination of relationships that might exist between selected sociodemographic variables and risk-taking attitudes as expressed in YDAS responses.

In Part Five (Appendix I), sections of the Mann Inventory, an instrument with established reliability and validity (Kenel, 1968), were used as a measure of concurrent validity of parts of the YDAS. (This, along with the semantic differential, as described in Part Two, comprise the two parts of the total five-part battery so used.) The two scales of the Mann Inventory chosen for this purpose were 1) Sociability and 2) Risk Taking and Power Seeking, since both related to accidents and violations and yielded high reliability coefficients in a previous study (Table 1). The reliability of the Mann Inventory was assessed by calculating various reliability coefficients based on a posttest administration as well as comparisons of pretest and posttest responses. Validity of this instrument was established by relating each scale of the Mann Inventory to accident and violation occurrences (Kenel, 1968). Part One of the YDAS could be said to have concurrent validity to the extent that it correlated with the two chosen scales of the Mann Inventory (Part Five).

Table 1

Reliability Coefficients and Pre-Post Correlations
for Mann Inventory Subscales for Males (M) and Females (F)

Subscale	Cronbach Alpha		Guttman		Spearman Brown		Pre-Post Correlations	
	M	F	M	F	M	F	M	F
Sociability	.77	.73	.78	.75	.76	.75	.65	.66
Risk Taking and Power Seeking	.65	.60	.66	.62	.65	.61	.64	.61

Administration of the 150-Item YDAS

The 150-item YDAS was given as Part One of the five-part battery described above. The intention was to reduce the number of items in each of the eight categories from 20 (except for beer: 10 items) to 10 items per category (after combining beer with drinking and driving because beer was overwhelmingly the alcoholic beverage of choice when driving after drinking occurred) for a total of 70. When they had considered such factors as time required for completion compared with time likely to be available, the authors and authorities agreed that 70 would be a workable number for administration and analysis in most settings.

In addition, data were analyzed to see which items should be retained to achieve a 70-item YDAS that had acceptable reliability--determined in this instance primarily by Cronbach's Alpha.

Another objective was to determine the validity of the eight categories (hereafter in this paper called content areas) as indicated by correlations with Parts Two, Three, and Five of the battery.

Setting and Subjects

The sample consisted of 448 male and female high school students approximately 15-16 years old who in the Fall of 1988 were already licensed drivers or about to be. They were a sample of convenience, recruited with the help of the AAA Foundation for Traffic Safety and various units of the American Automobile Association, from six cities in the United States and Canada: Providence, RI; Omaha, NE; San Francisco and Los Angeles, CA; Hamilton, Ont. (Canada); and Edmonton, Alta. (Canada). A cross-section of teenagers was sought by including individuals from this broad selection of geographical areas, and from urban and non-urban areas within them. A standardized administrative procedure was followed at each site to ensure consistency (Appendix J).

The usable sample was reduced, primarily due to missing data, from 448 respondents to 403--217 females, 184 males, and two who did not specify sex. Table 2 shows distribution by age and sex; Table 3, by site.

Data Analysis

Responses to the five parts of the battery (including the 150-item YDAS, or Part One) were coded and keypunched for processing into the DEC computer system at Teachers College, Columbia University.

Each of the 150 items in Part One was scored as follows: 1 = strongly agree, 2 = agree, 3 = disagree, and 4 = strongly disagree. The reverse of this scoring was used when appropriate for the direction of the item. The sum of the individual item scores in each content area was considered the total score for that area. The score for Part Two was derived from the four, seven-position bipolar adjective scales (Appendix K). The highest possible score was 28, and the lowest, four, for each

Table 2

Frequency Distributions and Percentages of Respondents by Age and Sex

Characteristics	Number	Percent
Age		
14		
male	9	2.2
female	20	5.0
15		
male	97	24.1
female	105	26.0
16		
male	49	12.2
female	73	18.1
17		
male	22	5.5
female	11	2.7
18		
male	7	1.7
female	8	2.0
omitted age and/or sex	2	0.5
Total	403	100.0

Table 3

Frequency Distribution and Percentages of Respondents by Site

Site	Number	Percent
Edmonton, Alberta	67	16.6
Providence, Rhode Island	49	12.2
Omaha, Nebraska	71	17.6
San Francisco, California	52	12.9
Los Angeles, California	88	21.8
Hamilton, Ontario	76	18.9
Total	403	100.0

dimension. Appendix K also indicates the high end of each scale for scoring purposes. For Part Three, items 1-6 (DBC6), only a total score was used, derived by adding the six individual item scores: 1 = definitely yes, 2 = maybe, and 3 = definitely no. For Part Five, the two scales of the Mann Inventory, scoring was as follows: 1 = always, 2 = usually, 3 = sometimes, 4 = rarely, and 5 = never.

Analyses were directed toward:

- 1) reducing the 150-item Part One to 70 items for reasons of practicability. Toward this end, product moment correlations between an item and the total content-area score were computed for each of the seven areas.
- 2) determining internal consistency for each of the Part One content areas. This was accomplished by computing Cronbach's Alpha for the areas.
- 3) checking the validity of the content areas of Part One by computing:
 - a) multiple correlation coefficients for Part One content area scores and the DBC6 score of Part Three;
 - b) correlations between the total scores of the five more risk-specific categories of Part One (speeding, seatbelts, safe driving, drinking and driving, and riding with an unsafe driver) and items 1-6 of Part Three;
 - c) multiple correlations between YDAS scores and four Semantic differential dimensions; and
 - d) correlations between the scores of the five risk behavior content areas of Part One and the selected scales of the Mann Inventory (Part Five).

Results

Item Selection

Two criteria were employed in reducing the 150-item YDAS to 70 items:

- 1) relatively high product-moment correlations suggested retention; relatively low, elimination.
- 2) coverage of content within an area. When items seemed obviously redundant, product-moment correlations were occasionally subordinated to comprehensive coverage.

In addition, since one form for both sexes seemed the only practicable outcome, items with appreciable differences in product-moment correlations by sex also were eliminated.

The product-moment correlations between item and content area scores are presented in Tables 4-10. An asterisk (*) denotes the items retained for the 70-item YDAS. The items are identified by their number in the 150-item form in Appendix C.

Table 4

Product Moment Correlations Between Item and Total Score
for Content Area
Speeding

Items	M (N=184)	F (N=217)	Total Group (N=403)
1	.53	.50	.53
12	.63	.55	.61
* 18	.68	.60	.65
29	.42	.43	.45
38	.45	.50	.48
* 46	.62	.70	.64
* 54	.60	.51	.59
* 56	.43	.46	.45
* 66	.66	.59	.64
* 77	.53	.61	.58
* 91	.78	.71	.74
* 93	.64	.58	.62
* 101	.68	.59	.64
109	.53	.60	.57
* 116	.68	.59	.65
123	.51	.50	.52
129	.45	.52	.48
135	.20	.54	.41
140	.49	.49	.51
146	.38	.47	.43

*Items Selected

Table 5
Product Moment Correlations Between Item and Total Score
for Content Area
Seatbelts

Items	M (N=184)	F (N=217)	Total Group (N=403)
* 5	.60	.63	.62
* 11	.74	.70	.72
17	.47	.53	.51
24	.47	.43	.44
* 28	.74	.75	.75
* 34	.60	.62	.61
37	.65	.78	.73
44	.62	.72	.65
* 45	.51	.79	.66
53	.52	.56	.53
55	.68	.68	.68
* 65	.71	.71	.71
* 76	.58	.72	.66
84	-.43	-.48	-.45
92	.43	.63	.53
*100	.67	.71	.69
*102	.69	.76	.73
108	.32	.35	.33
*115	.48	.54	.51
122	.35	.47	.41

*Items Selected

Table 6
Product Moment Correlations Between Item and Total Score
for Content Area
Safe Driving

Items	M (N=184)	F (N=217)	Total Group (N=403)
* 2	.38	.37	.40
7	.27	.30	.29
* 19	.45	.53	.51
31	.36	.22	.28
35	.33	.48	.42
* 39	.46	.44	.46
* 47	.53	.49	.53
49	.35	.31	.32
63	.51	.45	.48
* 67	.37	.35	.35
* 70	.48	.48	.49
* 78	.40	.55	.47
* 90	.57	.47	.54
94	.25	.24	.23
110	.18	.24	.22
117	-.12	-.12	-.14
* 124	.44	.40	.45
130	.21	.27	.24
141	.58	.43	.53
* 149	.53	.47	.52

*Items Selected

Table 7
Product Moment Correlations Between Item and Total Score
for Content Area
Drinking and Driving/Beer

Items	M (N=184)	F (N=217)	Total Group (N=403)
3	.60	.57	.57
* 8	.44	.47	.46
* 10	.56	.63	.60
16	.47	.42	.45
20	.41	.52	.47
27	.39	.36	.38
30	.62	.65	.64
36	.51	.42	.46
* 40	.61	.65	.63
43	.48	.51	.49
52	.33	.43	.37
64	.52	.47	.50
* 60	.58	.52	.55
68	.53	.44	.49
75	.55	.37	.45
* 79	.65	.72	.68
89	.48	.56	.52
83	.43	.39	.40
* 85	.47	.63	.54
* 95	.63	.60	.62
99	.46	.49	.47
103	.55	.72	.64
107	.25	.33	.29
111	.45	.47	.46
* 118	.65	.71	.68
* 125	.53	.52	.53
131	.51	.63	.57
* 136	.49	.51	.51
142	.29	.38	.34
147	.25	.13	.18

*Items Selected

Table 8

Product Moment Correlations Between Item and Total Score
for Content Area
Concern for Others

Items	M (N=184)	F (N=217)	Total Group (N=403)
4	.24	.19	.20
* 13	.35	.40	.39
21	.21	.23	.24
32	.38	.39	.39
41	.54	.43	.47
48	.42	.30	.36
* 57	.47	.51	.50
61	.42	.24	.36
* 69	.37	.42	.39
* 72	.37	.47	.45
80	.53	.41	.46
* 88	.49	.44	.47
96	.17	.34	.25
104	.46	.37	.44
*112	.51	.45	.50
*119	.45	.41	.42
*126	.50	.49	.49
*132	.42	.58	.51
*137	.28	.30	.31
143	.19	.30	.27

*Items Selected

Table 9
Product Moment Correlations Between Item and Total Score
for Content Area
Riding With An Unsafe Driver

Items	M (N=184)	F (N=217)	Total Group (N=403)
6	.39	.54	.47
14	.47	.53	.51
22	.31	.26	.27
* 25	.64	.70	.67
* 50	.55	.56	.55
58	.50	.56	.54
* 62	.60	.60	.60
* 73	.66	.74	.70
* 81	.60	.57	.59
87	.59	.57	.58
* 97	.60	.63	.62
105	.29	.11	.21
113	.56	.61	.59
*120	.72	.65	.68
*127	.70	.76	.72
133	.61	.54	.57
138	.61	.72	.67
*144	.59	.65	.62
148	.44	.44	.44
*150	.59	.61	.61

*Items Selected

Table 10
Product Moment Correlations Between Item and Total Score
for Content Area
Myself

Items	M (N=184)	F (N=217)	Total Group (N=403)
* 9	.37	.46	.42
15	.15	.07	.11
23	.10	.04	.08
26	.25	.19	.21
* 33	.47	.56	.51
* 42	.42	.44	.42
* 51	.41	.51	.45
59	.43	.32	.38
71	.22	.24	.23
* 74	.56	.46	.51
* 82	.46	.48	.46
86	.40	.47	.44
* 98	.41	.52	.47
106	.44	.57	.50
* 114	.52	.49	.51
121	.51	.38	.44
128	.56	.50	.53
134	.40	.38	.39
* 139	-.02	-.01	-.02
* 145	.50	.58	.53

*Items Selected

Reliability

The items of Part One were divided into the seven content areas shown in Table 11. Coefficient alpha is a measure of the extent to which items in a measurement instrument are consistent with one another in what they measure--the higher the coefficient, the more internally consistent, the more reliable the instrument by this measure. Reliability estimates (Cronbach's Alpha), for the seven content areas of the 150-item YDAS (Part One), ranged from .66 to .89 for males and females combined, to .66 to .89 for males and .64 to .90 for females--all suitably high (Table 11).

Table 11

Internal Consistency (Coefficient Alpha) of Each Content Area
of Part One for Males, Females and Total Group

Content Area	Males (N=184)	Females (N=217)	Total Group (N=403)
Seatbelts	.86	.90	.88
Speeding	.88	.88	.88
Safe Driving	.68	.64	.67
Drinking and Driving/Beer	.89	.90	.89
Concern for Others	.70	.67	.70
Riding with an Unsafe Driver	.88	.89	.89
Myself	.66	.68	.66

While the reliability of the Semantic Differential, Part Two of the test battery, was well established (Osgood, Succi, & Tannenbaum, 1957; DeCicco, 1987; Basch, DeCicco, & Malfetti, 1987), the authors saw an opportunity in the data to calculate it once again, particularly since the Semantic Differential was to be used as a validity check for Part One. Table 12 lists the internal consistency coefficients for each of the dimensions on each of the nine concepts for males; Table 13 for females; and Table 14, for males and females combined. All coefficients are acceptably high.

Table 12
Internal Consistency for Each Concept on Each Dimension for Males

Concepts	Dimension			
	Evaluation	Activity	Potency	Stability
Riding with an Unsafe Driver	.91 (178)*	.63 (177)	.68 (180)	.75 (181)
Seatbelts	.82 (178)	.71 (179)	.67 (179)	.78 (180)
Safe Driving	.88 (181)	.69 (177)	.86 (176)	.80 (180)
Speeding	.86 (179)	.74 (172)	.85 (177)	.84 (180)
Drinking and Driving	.94 (183)	.69 (170)	.88 (178)	.72 (179)
Concern for Others	.90 (182)	.62 (178)	.81 (179)	.86 (181)
Myself	.93 (181)	.78 (176)	.83 (176)	.84 (178)
Beer	.92 (179)	.80 (178)	.89 (175)	.86 (180)
Self Confidence	.92 (181)	.74 (177)	.84 (177)	.88 (179)

*n's differ due to missing data

Table 13

Internal Consistency for Each Concept on Each Dimension for Females

Concepts	Dimension			
	Evaluation	Activity	Potency	Stability
Riding with an Unsafe Driver	.90 (212)*	.52 (205)	.64 (207)	.67 (211)
Seatbelts	.79 (214)	.58 (209)	.62 (212)	.80 (212)
Safe Driving	.87 (211)	.70 (208)	.71 (210)	.75 (213)
Speeding	.88 (211)	.73 (210)	.73 (206)	.80 (209)
Drinking and Driving	.92 (211)	.60 (207)	.78 (207)	.69 (213)
Concern for Others	.93 (211)	.67 (210)	.75 (207)	.86 (211)
Myself	.93 (212)	.61 (210)	.77 (205)	.78 (212)
Beer	.89 (213)	.72 (209)	.82 (198)	.70 (210)
Self Confidence	.95 (214)	.67 (210)	.77 (208)	.84 (209)

*n's differ due to missing data

Table 14
Internal Consistency for Each Concept on Each Dimension for
Total Group

Concepts	Dimension			
	Evaluation	Activity	Potency	Stability
Riding with an Unsafe Driver	.90 (392)*	.58 (383)	.65 (389)	.71 (394)
Seatbelts	.80 (394)	.65 (390)	.64 (393)	.79 (394)
Safe Driving	.88 (394)	.70 (387)	.80 (387)	.78 (395)
Speeding	.88 (392)	.74 (384)	.80 (385)	.82 (391)
Drinking and Driving	.93 (396)	.64 (379)	.84 (387)	.70 (394)
Concern for Others	.91 (395)	.65 (390)	.78 (388)	.86 (394)
Myself	.93 (395)	.70 (388)	.81 (383)	.80 (392)
Beer	.91 (394)	.76 (389)	.86 (375)	.80 (392)
Self Confidence	.94 (397)	.70 (389)	.81 (387)	.86 (390)

*n's differ due to missing data

Reliability estimates (Cronbach's Alpha) were calculated for the first six items of Part Three, DBC6, yielding an alpha of .86. Again, reliability calculation was judged desirable, since these items were to serve as a validity check of Part One.

Validity

Multiple criteria were used to determine concurrent validity of the 150-item YDAS (Part One). Five of the seven content areas of the YDAS were judged to be more directly suitable as risk categories for analyses of validity: speeding, seatbelts, safe driving, drinking and driving/beer, and riding with an unsafe driver. Myself and concern for others were omitted. The following analyses were conducted with the five risk content areas of Part One indicated above:

1) Product moment correlations between the five content areas of Part One and the total score for Part Three, items 1-6 (DBC6). A low score in the content areas is desirable, as is a high score on the six items of Part Three. Thus, the correlations shown in Table 15 are suitably negative, and of adequate magnitude.

2) Multiple correlations between the five content areas of Part One and Part Three total score (items 1-6).

The purpose of this analysis was to determine concurrent validity of the five risk-taking content areas of Part One with the six items of Part Three as the criterion measure. The correlations support concurrent validity between the two measures (Table 16).

Table 15

Product Moment Correlations Between Part One Risk Behavior
Content Area Scores and Part Three Total Score (items 1-6) for
Males, Females, and Total Group

Content Area	Males (N=184)	Females (N=217)	Total Group (N=403)
Speeding	-.34	-.67	-.45
Seatbelts	-.24	-.52	-.32
Safe Driving	-.29	-.56	-.38
Drinking and Driving/Beer	-.29	-.60	-.39
Riding with an Unsafe Driver	-.31	-.61	-.41

Note: A high score on Part Three items 1-6 means less risky. Therefore, correlations are understandably negative.

Table 16

Multiple Correlations Between Part One Risk Behavior
Content Area Items and Part Three Total Score (items 1-6) for
Males, Females, and Total Group

Content Area	Males (N=184)	Females (N=217)	Total Group (N=403)
Speeding	.49	.73	.50
Seatbelts	.34	.63	.37
Safe Driving	.45	.67	.47
Drinking and Driving/Beer	.41	.70	.44
Riding with an Unsafe Driver	.41	.67	.46

3) Product moment correlations of the five risk content area scores of Part One with the two Mann Inventory (Part Five) subscales--Risk Taking and Power Seeking, and Sociability. As an instrument of recognized validity, the scales of the Mann were the criterion measure. The magnitude and direction of the correlations (Table 17) suggested that concurrent validity between the two measures had been established. The note at the bottom of Table 17 explains the negative and positive correlations.

4) Multiple correlations between the seven Part One content area scores (myself and concern for others were put back in) and Part Three total scores. The coefficients were adequately high: males = .39, females = .72, and combined = .49.

5) Multiple correlations between the seven content area scores of Part One and the 36 Semantic Differential Dimension scores of Part Two, with the Semantic Differential as the criterion measure (Table 18). As can be seen, the correlations were uniformly high.

The results of the five analyses described above suggest that the concurrent validity of the 150-item YDAS has been established.

Table 17

Product Moment Correlations of Part One Risk Behavior
Content Area Scores with Mann Inventory Subscales (Part Five)
Risk Taking and Power Seeking, and Sociability
for Males, Females, and Total Group (TG)

Content Area	Risk Taking & Power Seeking			Sociability		
	M (N=184)	F (N=217)	TG (N=403)	M (N=184)	F (N=217)	TG (N=403)
Speeding	-.50	-.50	-.52	.30	.36	.36
Seatbelts	-.24	-.26	-.27	.29	.26	.28
Safe Driving	-.42	-.50	-.49	.33	.29	.32
Drinking and Driving/Beer	-.51	-.37	-.44	.42	.36	.38
Riding with an Unsafe Driver	-.44	-.32	-.39	.39	.36	.34

Note: High score on Mann Inventory's Risk Taking and Power Seeking scale means less risky. Therefore, correlations should be all negative. However, a high score on the Sociability scale means less social. Therefore, the correlations with Part One should be all positive.

Table 18

Multiple Correlations Between Part One Content Area Scores and
36 Semantic Differential Scores (Part Two)

Content Area	Males (N=184)	Females (N=217)	Total Group (N=403)
Speeding	.78	.77	.75
Seatbelts	.78	.78	.74
Safe Driving	.70	.65	.63
Drinking and Driving/Beer	.72	.70	.66
Riding with an Unsafe Driver	.72	.70	.68
Myself	.57	.61	.56
Concern for Others	.64	.64	.57

Administration of the 70-Item YDAS

With support for the reliability and concurrent validity of the 150-item Young Driver Attitude Scale (YDAS) established, the task became verifying the reliability and validity of the YDAS form that had been reduced to 70 items. Most of the steps followed for the 150-item form in this regard were, after some reduction, reapplied to the 70-item YDAS.

The reduced YDAS (10 items in each of seven content areas) was given as Part One of a four-part battery (Appendix L). Part Two was a reduced version of the semantic differential instrument employed in the original battery including the 150-item YDAS. In the reduced version, only five YDAS risk content areas were correlated with five corresponding semantic differential concept dimensions. Parts Three and Four remained as they were described in the original five-part battery, and Part Five, the scales of the Mann Inventory, were omitted because they were lengthy, of low face-validity for this effort, and had served their concurrent validity purposes when given as Part Five of the original battery.

Setting and Subjects

The sample consisted of 247 respondents. However, the usable number was reduced because of a large amount of missing data, from ten respondents. Thus, analyses were based on 237 usable responses--122 females, 114 males, and one whose sex was not reported. Table 19 provides descriptive details of the sample by age and sex; Table 20, the sample distribution by site. Once again, wide geographic distribution was sought, along with urban and non-urban representation.

Data Analysis

Responses to the four-part battery were coded, scored, keypunched, and analyzed much in the fashion of the five-part battery described earlier. Analyses were once again directed toward determining the reliability and validity of the YDAS, this time the 70-item version. Reverse scoring items for the 70-item YDAS are indicated in Appendix M.

Reliability

Reliability coefficients (Cronbach's Alpha) were computed for each of the seven ten-item content areas of the YDAS. These internal consistency coefficients ranged from .63 to .89 for males, .66 to .86 for females, and .71 to .88 for the combined group (Table 21), all suitably high.

Product-moment correlations were computed for each item in a content area, and the total score of the items in that area. Tables 22 to 28 show these correlations for the five content areas and for each of the items comprising them, by sex and for the total group. The correlations are adequately high.

Table 19

Sample Frequency Distributions and Percentages by Age and Sex

Characteristics	Number	Percent
Age		
14		
male	14	5.9
female	18	7.6
15		
male	60	25.3
female	67	28.3
16		
male	28	11.8
female	31	13.1
17		
male	12	5.1
female	6	2.5
omitted age and/or sex	1	0.4
Total	237	100

Table 20

Sample Frequency Distribution and Percentages by Site

Site	Number	Percent
Pittsburgh, Pennsylvania	80	33.8
Miami, Florida	49	20.7
Albuquerque, New Mexico	55	23.2
Grand Rapids, Michigan	53	22.3
Total	237	100

Table 21

Internal Consistency (Coefficient Alpha) for Each Content Area
of YDAS for Males, Females, and Total Group

Content Area	Males (N=114)	Females (N=122)	Total Group (N=237)
Speeding	.84	.76	.82
Seatbelts	.89	.86	.88
Safe Driving	.70	.66	.72
Drinking and Driving/Beer	.80	.80	.80
Riding with an Unsafe Driver	.83	.84	.83
Myself	.74	.78	.76
Concern for Others	.63	.71	.71

Table 22

Product Moment Correlations Between Item and Total Score
for Content Area
Speeding

Items	Males (N=114)	Females (N=122)	Total Group (N=237)
8	.53	.46	.52
18	.66	.68	.67
22	.59	.40	.54
23	.49	.45	.49
28	.66	.66	.68
36	.58	.54	.59
44	.74	.67	.73
45	.75	.59	.68
50	.71	.67	.70
55	.68	.63	.69

Table 23

Product Moment Correlations Between Item and Total Score
for Content Area
Seatbelts

Items	Males (N=114)	Females (N=122)	Total Group (N=237)
2	.58	.50	.54
6	.78	.75	.77
11	.77	.70	.74
13	.71	.61	.67
17	.80	.73	.77
27	.81	.64	.73
35	.73	.65	.69
49	.71	.81	.75
51	.73	.72	.73
54	.42	.61	.51

Table 24

Product Moment Correlations Between Item and Total Score
for Content Area
Safe Driving

Items	Males (N=114)	Females (N=122)	Total Group (N=237)
1	.49	.34	.47
9	.60	.56	.61
14	.59	.51	.57
19	.59	.56	.56
29	.27	.33	.30
31	.51	.47	.52
37	.51	.65	.60
43	.60	.50	.60
59	.49	.60	.58
69	.55	.47	.56

Table 25

Product Moment Correlations Between Item and Total Score
for Content Area
Drinking and Driving/Beer

Items	Males (N=114)	Females (N=122)	Total Group (N=237)
3	.54	.51	.52
5	.61	.68	.65
15	.63	.69	.66
25	.49	.59	.54
38	.65	.57	.62
41	.59	.57	.57
46	.68	.67	.68
56	.71	.73	.72
60	.60	.51	.56
65	.52	.59	.56

Table 26

Product Moment Correlations Between Item and Total Score
for Content Area
Riding With An Unsafe Driver

Items	Males (N=114)	Females (N=122)	Total Group (N=237)
10	.61	.67	.65
20	.57	.61	.60
26	.67	.63	.66
33	.60	.77	.69
39	.56	.30	.42
47	.50	.57	.53
58	.78	.78	.78
62	.74	.74	.75
67	.70	.73	.71
70	.56	.59	.59

Table 27
Product Moment Correlations Between Item and Total Score
for Content Area
Myself

Items	Males (N=114)	Females (N=122)	Total Group (N=237)
4	.49	.41	.46
12	.57	.62	.55
16	.50	.50	.51
21	.51	.58	.55
34	.48	.58	.54
40	.49	.65	.58
48	.48	.62	.56
53	.54	.51	.53
63	.67	.63	.65
68	.69	.67	.65

Table 28
Product Moment Correlations Between Item and Total Score
for Content Area
Concern for Others

Items	Males (N=114)	Females (N=122)	Total Group (N=237)
7	.29	.51	.40
24	.64	.66	.66
30	.41	.47	.46
32	.52	.58	.59
42	.46	.43	.46
52	.50	.48	.50
57	.47	.58	.54
61	.51	.56	.56
64	.49	.57	.54
66	.51	.52	.56

Test-Retest Reliability

Test-retest correlations were sought to determine the stability over time of the YDAS items. The higher the values of these correlations, the more stable the item. Because of limits imposed by logistics and financial concerns, only Pittsburgh was a retest site. The 70-item YDAS was given as Part One of the four-part battery to a sample of 80 in the first administration, and these respondents were identified by the last three digits of their telephone number. The retest of the 70-item YDAS was given by itself to 79 respondents, two weeks later. However, only 56 of the completed forms with adequate data for analysis could be successfully matched with those of the first administration. Table 29 presents the test-retest correlations for males, females, and the combined group. As can be seen, the test-retest correlation coefficients ranged from .72 to .85 for the combined group, .68 to .91 for males, and .66 to .83 for females, suggesting that the items of the 70-item YDAS were stable from the first administration to the second.

Validity

The criterion measures used to determine concurrent validity were an abbreviated Semantic Differential (Part Two) and the six future driving behavior items of Part Three. Since the Semantic Differential took considerable response time in the 150-item YDAS administration, the concepts Concern for Others, Myself, and Self-confidence were eliminated because they were deemed less relevant for risk-taking than the remaining five. The scales of the Mann Inventory were not used as a criterion measure, since concurrent validity had been established with them earlier.

Table 29

Test-Retest Correlations of YDAS for Males, Females, and Total Group

Content Area	Males (N=25)	Females (N=31)	Total Group (N=56)
Speeding	.81	.79	.82
Seatbelts	.91	.80	.85
Safe Driving	.80	.66	.77
Drinking and Driving/Beer	.86	.69	.75
Riding With An Unsafe Driver	.68	.83	.78
Myself	.86	.61	.72
Concern for Others	.81	.61	.76

The following analyses were conducted to determine concurrent validity:

1) Multiple correlations between five YDAS risk-content-area scores and corresponding Semantic Differential concept dimensions (Table 30). The correlations for males, females, and the combined group were adequately high.

2) Multiple correlations between YDAS content area scores and 24 Semantic Differential dimension scores (Table 31). Once again, the correlations were acceptably high.

3) Multiple correlations between five YDAS risk-content-area items and Part Three total score (items 1-6) (Table 32). The correlations are again of a satisfactory magnitude.

4) Product-moment correlations between five YDAS risk-content-area scores and Part Three total score of items 1-6 (Table 33).

The results of these analyses lend further support to the concurrent validity of the 70-item YDAS. The authors, satisfied that they had created a reliable and valid 70-item risk-taking attitude survey for young drivers, now turned their attention to applying the survey results. However, because the scores to date had been provided by only 237 subjects, the authors made use of the scores of an additional 431 subjects to whom the YDAS was administered (as described at a later point in this report), in creating the YDAS hand-scoring instructions and norms presented in Appendix N.

Table 30

Multiple Correlations Between Five YDAS Risk Content Area Scores and Corresponding* Semantic Differential Concept Dimensions

Content Areas	Male (N=114)	Female (N=122)	Total Group (N=237)
Speeding	.64	.53	.61
Seatbelts	.68	.66	.68
Safe Driving	.38	.48	.43
Drinking and Driving/Beer	.59	.65	.59
Riding With An Unsafe Driver	.43	.53	.51

Note: Since Drinking and Driving and Beer are separate concepts of the Semantic Differential, they were combined to give a total of eight predictors for the YDAS content area Drinking and Driving/Beer.

*For example, the Semantic Differential concept speeding corresponds to the YDAS content area speeding.

Table 31

Multiple Correlations Between YDAS Content Area Scores and
24 Semantic Differential Dimension Scores

Content Area	Males (N=114)	Females (N=122)	Total Group (N=237)
Speeding	.72	.65	.65
Seatbelts	.41	.41	.29
Safe Driving	.46	.55	.30
Drinking and Driving/Beer	.42	.47	.27
Riding With An Unsafe Driver	.54	.46	.24
Myself	.35	.47	.32
Concern for Others	.47	.52	.35

Table 32

Multiple Correlations Between Five YDAS Risk-Behavior-Content Area
Items and Part Three Total Score (items 1-6)

Content Areas	Male (N=114)	Female (N=122)	Total Group (N=237)
Speeding	.44	.42	.38
Seatbelts	.43	.29	.27
Safe Driving	.34	.38	.30
Drinking and Driving/Beer	.27	.39	.28
Riding With An Unsafe Driver	.40	.24	.27

Table 33

Product Moment Correlations* Between Five YDAS Risk Behavior
Content Area Scores and Part Three Total Score (items 1-6)

Content Area	Males (N=114)	Females (N=122)	Total Group (N=237)
Speeding	-.25	-.31	-.29
Seatbelts	-.13	-.20	-.17
Safe Driving	-.28	-.23	-.27
Drinking and Driving/Beer	-.24	-.25	-.25
Riding With An Unsafe Driver	-.13	-.16	-.21

*These correlations are all quite properly negative because a high score on the YDAS means "more risky," whereas a high total score on the driving behavioral intention items means "less risky."

Meaning and Use of YDAS Scores

Whenever a diagnostic or measuring instrument yields scores, there is justifiable interest in the meaning and utilization of those scores. Appendix N contains explicit instructions for hand scoring the YDAS, and norms for interpreting the scores.

Hand scoring is, at best, a tedious clerical task, and the "Form for Hand Scoring of YDAS," presented in Appendix N, is intended to make it less painful and more accurate than it otherwise might be. A drawback is that one copy of the form would have to be used for each student. However, these could be supplied to teachers along with the YDAS itself. Alternatively, one copy could be supplied, to be duplicated by the teacher. A more intriguing possibility would be to develop a format and procedure whereby respondents could score themselves, interpret the meaning, and be directed to a discussion of ways to overcome any shortcomings revealed.

Interventions

To start at the end, the authors confirmed their belief that it is easier to diagnose faulty attitudes than to do something positive about them. Nevertheless, they tried, and the details of that effort follow.

As stated earlier, motor vehicle accidents are the leading cause of death for people between ages five and twenty-four (Grossman, 1984). The average age of fatal-crash victims from 1975 to 1983 was nineteen (Lawson et al., 1984). Our intervention efforts focused on major contributing factors to this killing of young people, and on what might be done to have them negotiate the early years more safely. On the basis of an extensive search of the pertinent literature, we selected three factors: drinking and driving, seatbelt use, and speeding.

In 1986, of the nearly 15,000 traffic fatalities to American youth aged 16 to 24 years, approximately 9,000 were related to alcohol. Thirty-four percent of 15-19 year olds in fatal accidents had some blood alcohol concentration (NHTSA FARS, 1986).

It has been clear for a long time that safety restraints can save lives. In 1969, the first year after mandatory seatbelt installation in the United States, Forrest Council of the Highway Safety Research Center stated:

For the automotive public, the seatbelt and shoulder harness are perhaps the greatest single individually controlled safeguard against serious injury or death in the event of a crash. (p. 134)

More recently, it has been estimated that safety restraints could save approximately 16,000 lives annually (National Safety Council, 1983), and are 50-60 percent effective in reducing serious injury (Lawson et al., 1984). However, while seatbelt use has increased to 14 percent in the general population (National Highway Traffic Safety Administration, 1983), it has been estimated to be only four percent among teenagers (Lawson et al., 1984). Ironically, it has also been documented that the drinking driver more often has been a non-seatbelt user than the non-drinking driver (Dalgaard, 1977; Farris et al., 1977).

Speeding is another risk behavior contributing to young-driver deaths. In the general population, 16 to 23 percent of car accidents and 30 to 35 percent of fatal accidents have been attributed to speeding, in whole or in part (Marks et al., 1982). A self-report study of 18-22 year old drivers (Basch et al., 1987) found speeding to be the most commonly admitted unsafe driving practice. Many times, excess speed and alcohol are combined (White & Clayton, 1972) and it has been suggested that this combination is involved in 65 percent of fatal accidents to young drivers (Yaksich, 1982). Thus, the investigators chose or created interventions which held promise for influencing the risk-taking attitudes underlying these three behaviors. The interventions were intended for the 15-16 year-olds found to be at risk by responses to the 70-item YDAS.

The investigators were interested in reaching young people in school or community settings before they began to drive and had the opportunity to act out risky attitudes on the road. The teenager is vulnerable to suggestion (Smart & Smart, 1967), and "can regulate his actions because

he can remember the past and anticipate the future..." (Singer & Singer, 1969, p. 384). These same authors suggest that the adolescent is aware of social rules and of the consequences of contrary behavior. Young persons are seeing themselves as a part of a society into which they need to fit. Adolescence is a time when attitudes can be influenced to increase chances that the transition to the adult world and its privileges--such as driving--will be positive and effective.

Of course, the investigators' long-range hope is not only that risky attitudes will be changed, but that behavior on the road would reflect the change when the 15-16 year olds subject to the interventions become licensed. In general, the theoretical base for the interventions followed Zimbardo and Ebbesen (1969) and others who believe that the predispositions that make up attitudes are learned, and thus can be changed, and that "by changing underlying attitudes, more enduring changes in behavior should be produced than by trying to directly change only the behavior in question" (p. 7).

The interventions relied heavily on the results of a focus-group attitudinal study in which two authors of the present study were involved (Basch et al., 1987) and on learning and behavior-change theories especially applicable to adolescents. The Basch study suggested that young driver improvement programs should include:

- focusing on their values and goals;
- recognizing the possible social attractiveness of unsafe driving as perceived by young people;
- identifying and dealing with the emotional causes of unsafe driving;
- assisting young people to find ways--other than unsafe driving--to achieve their personal and social goals. (p. 62)

Vicarious learning using local traffic mishaps was suggested by focus-group participants, supporting Bandura's social learning implications (1977): programs arising from local concerns produce stronger identification and response than can be expected from those relying on national statistics.

Values clarification (Werch, 1980) and decision-making components have been recommended for safety programs for young people (Boyd & Huffman, 1984):

If a young person is not taught to value himself and life and to make choices responsibly, mature habits and attitudes will not surface in his or her lifestyle. (p. 4)

McKnight and McPherson (1986) developed a peer-intervention program in which young people effectively intervened to preserve and protect the safety of friends. McKnight (1987) concluded:

Teachers and counselors might well depend less upon their own ability to affect...teenagers, and devote more of their effort to encouraging and assisting other teenagers to do it. (p. 26)

This conclusion fits well with a recommendation (Basch et al., 1987) to make use of focus-group discussions with young people as a means of exploring traffic safety problems and ways to reduce them, instead of following the old lecture or "sermon method." The group of which one is a member can be a significant force on behavior. Lewin (as reported in Coleman, 1964) suggests that the power of group discussion and consensus has lasting effects.

From the array of possibilities described above, the investigators selected or created various interventions, and subjected them to formative evaluation including: the use of a modified Delphi Technique (Linstone & Turoff, 1975) with safety professionals as judges; a series of focus-group discussions with young people; evaluations for potential effectiveness with the Traffic Safety Communication Rating Scale (TSRCS) (Malfetti, 1986) as a measure; a series of pre-pilot tests with 15-16 year olds in school and community settings. (Full details of these efforts are found in DeKorp, 1989).

Shortly after the application of the Delphi technique, four focus group discussions with pre-drivers were completed at four sites (see Appendix O for group questions): one community group, one high school group, and two alternate learning groups (presumably high risk students). The ages within these groups ranged from 13 to 17. The discussions were intended to determine what the pre-drivers viewed as potentially successful strategies for influencing their traffic behavior. The results were used to modify intervention activities already developed and to assist in creating additional activities--"do's and don't's" to guide the study team. The participants in these discussions also completed a questionnaire (Appendix P). The total time for each group discussion ranged from 30-44 minutes.

Though the groups could not recall many specific activities which were influential in their learning, they did have some specific ideas on what and what not to offer. Some suggestions were:

- avoiding lectures or sermons;
- allowing the student more freedom to make decisions;
- a relaxed atmosphere;
- using first-hand experience and more student participation.

It was obvious that group members were eager to contribute their thoughts.

The first activity emerging from the above efforts was a demonstration called "The Road of No Return: A Mock DWI Arrest" and was held at the New York State Troopers' Barracks in Claverack, New York (Appendix Q). The barracks' sergeant and a trooper led the activity for

eight members of a church youth group, ages 14-17, accompanied by the minister. The meeting took one hour, and an additional 15 minutes taken for evaluation. The activity leaders discussed in detailed sequence the procedure of DWI arrest from the moment the suspected vehicle is stopped to the arraignment of the driver in court. At one point, the participants examined the Breathalyzer and learned its purpose and function through questions and answers.

After this discussion, the participants were shown photographs of a local DWI accident in which three people were killed. The officers took this time to discuss not only DWI effects but also those of speeding and failure to fasten seatbelts (both of which were evident in this accident). They used the fatal accident to highlight the need for defensive driving (anticipating the unsafe actions of other people).

Upon returning to the church, the participants anonymously completed an evaluation of the activity (Appendix R) and a general information sheet (Appendix S). Participants found the activity worthwhile, and stated that it would certainly "make them think twice" about drinking and driving. All participants would recommend the activity to a friend, and felt that it would make them better drivers. There were few suggestions; but one, expressed in writing and orally, was to have a participant use the Breathalyzer, perhaps with a simulated breath sample containing alcohol, rather than just explain how it is used. The minister completed the Traffic Safety Communication Rating Scale (TSCRS) and gave the activity a rating of 36 out of a possible 50 points, a comparatively high rating on this instrument.

Because of the positive response, and the willingness of the state troopers to conduct it, this activity was included in the final national pilot-testing described later in this report.

The second activity was a discussion called "The Effects of Traffic Violations on Insurance Policies and Premiums." It was chosen because the high cost of insurance was a frequently and vehemently expressed concern of 15-16 year olds. It was led by a local independent insurance agent. In a visit to his office, the investigators described the purpose of the activity (to make young about-to-be drivers aware of the financial consequences on their insurance if convicted of DWI or speeding).

The discussion was conducted during a study period at Taconic Hills High School (New York), a rural school. Because the room was a study hall and the teacher had not been informed of our arrival time, the students had been given the choice to remain or leave. This left only six students.

After one of the authors briefly described the study and its importance, the insurance agent made his presentation. He gave each student an information sheet which listed the insurance rates for a particular make and model of automobile "before and after" speeding and DWI convictions. Without overemphasizing statistical information, he

discussed the insurance companies' view that young drivers, particularly males, were high-risk drivers.

The meeting was over in 20 minutes; evaluation (Appendix R) took an additional 12 minutes. The TSCRS score (provided by the study hall teacher) was 23 points from a possible 50, appreciably lower than the "Mock DWI Arrest" TSCRS score of 36. The score was low mainly because of low subscores in "Communicator" and "Technique," two of the five categories of the TSCRS.

Of the six participants, ranging between 16 and 17 years old, with only one holding a license, five completed the evaluation form. Although all would recommend the activity to a friend, and felt the experience would make them better drivers, other ratings were so low, and suggested revisions so extensive, that the activity was dropped.

To summarize, in addition to the TSCRS and the evaluations, all participants in the pre-pilot tests completed an eight-item personal data questionnaire (Appendix P). The objectives were twofold: to determine the age of expected licensure and how safe a driver the participants anticipated being. It was thought, also, that some of their answers and explanations might generate ideas for additional activities or for modification of those already chosen. Furthermore, all activities in the national pilot test followed focus-group methods one way or another in their discussions of risk-taking vs. safe-driving. It seemed that focus group encapsulated most of the pre-pilot suggestions for creating and conducting interventions most likely to influence high-risk attitudes.

Data Collection

The interventions chosen for impact on high-risk attitudes were applied in two settings, school and community. In both settings, the program included: (1) the 70-item YDAS; (2) a film, "Just Another Friday Night"; (3) a film-rating scale; (4) evaluation forms for teachers (school) or leaders (community) and students (school) or participants (community). In the community setting, the "Mock DWI Arrest" was included. To accommodate this addition, the session was lengthened by a half-hour and the discussion period was shortened. In the school setting, the intervention was administered by one of the investigators with the teacher as an observer and evaluator. In the community setting, it was conducted by a local police officer or state trooper who had been fully informed by the study team with regard to study purpose, content, and techniques.

The 70-item YDAS was administered pre- and post-intervention as a change measure. (It also provided a good opportunity to gather additional reliability and normative data for the YDAS.) "Just Another Friday Night" is a trigger film for young people about the consequences of drinking and driving; it invites their participation in decision-making and values clarification. It fulfills considerable of the requirements suggested for influencing attitudes. The various qualitative evaluation forms were

included to determine how those conducting or experiencing interventions regarded them, and for the investigators to learn how the interventions might be improved.

In the school setting, the intervention took a total 90 minutes, usually divided into two 45-minute periods, on two consecutive days. It required approximately 20 minutes for the 70-item YDAS as pre-test (Appendix L), including a cover sheet (Appendix S) read by study personnel, a behavioral intention form (Appendix T) revealing intended future driving behavior, and a personal information form (Appendix U). Also included in the total time was 15 minutes for the YDAS as post-test, and the second administration of the behavioral intention form. In the community setting, the intervention took 120 minutes, at one sitting, including the items above, in the same sequence.

Wide geographical and urban-rural representation was sought in sample selection (Table 34). There was a total usable sample of 431, 225 (52.2%) males, 197 (45.7%) females, and 9 (2.1%) unidentified by sex.

Table 35 shows the age distribution. Approximately 73% were age 15-16, the group for whom the intervention was intended. An estimate of driving frequency was requested of all attendees, and Table 36 shows the distribution for 326 of the sample (this information was not obtainable at some sites). The vast majority either had a license or intended to obtain one as soon as they were eligible.

Table 34
Sites, Settings, Sample Size

Site	Setting	n
Coxsackie, NY	School	105
Columbus, OH	School	35
	Community	23
Elk Grove, CA Auburn, CA	School	73
	Community	23
Newport News, VA Virginia Beach, VA	School	39
	Community	8
Bennington, VT	School	40
LeMoyne, VT	School	43
Rutland, VT	Community	42
Total		431

Table 35
Age Distribution By Frequency and Percentage

Years	n	%
14	31	7.2
15	174	40.4
16	139	32.3
17	49	11.4
All others	27	6.1
Total	420*	

*11 not indicated

Table 36
Driving Frequency and Percentages
(N=326)

Driving Frequency	n	%
Not at all	78	18.1
Once a month or less	15	3.5
Once a week	44	10.2
Two or three times a week	69	16.0
Four or five times a week	45	10.4
Daily	55	12.8
Omissions	20	6.1
Total	326	

Data Analysis and Results

A pre- and post-administration of the YDAS was used to measure the effectiveness of the intervention on risk-taking attitudes and behavioral intentions of the students/participants. It should be emphasized that this was a pilot test of the intervention, to try its present worth, and, if possible, improve it for future use if it seemed potentially valuable. The logistical limits of this pilot test precluded the use of a control group.

An analysis of variance was used as the statistical method in which the post-test and pre-test means were compared using the pre-test as the variant. Comparisons were made for each setting (school and community) in each content area for the Young Driver Attitude Scale (YDAS).

In Tables 37 and 38, the overall results of analysis of variance are shown for YDAS pre/post-test scores using the first five YDAS content areas (speeding, seatbelt use, safe driving, drinking and driving, and riding with an unsafe driver) as those more likely to be associated with risk-taking. Tables 39-52 show ANOVA results by setting (school or community) and by all seven content areas of the YDAS. While the intervention was directed toward only three content areas--drinking and driving, speeding, and seatbelt use--it was anticipated that the other areas might also be influenced. In the analyses of YDAS scores, the higher the mean, the higher the risk. Because the sample was small, the F-ratio was used to determine significance.

Table 37 reveals that, in the school setting, both sexes showed an increase in risk: the mean for males went from 102.9 to 104.9, and from 91.3 to 92.3 for females. In the community setting (Table 38), both sexes showed a decrease in risk with means decreasing from 94.7 to 93.3 for males, and from 85.6 to 83.4 for females. In both settings, mean scores of males were higher (greater risk).

In the school setting, two of the YDAS content areas on which the intervention focused--Drinking and Driving (Table 39) and Seatbelts (Table 41)--owed significantly increased post-test means (higher risk scores). Speeding (Table 40) showed a significant drop in risk when means were compared. This was true for both males and females. Results from analysis of variance of YDAS scores for the remaining four content areas (Safe Driving, Table 42; Riding With An Unsafe Driver, Table 43; Myself, Table 44; and Concern for Others, Table 45) showed a mixture of small gains and losses in pre/post-test means.

What stands out is that in every YDAS content area, males are significantly higher risks.

Tables 46-52 show the results of analysis of variance of YDAS scores for the community setting. The original sample was 102, but seven responses were not used because of insufficient data, leaving 95.

Table 37
School Setting
 Means, Standard Deviations, and Analysis of Variance
 of YDAS Scores for Total Risk*
 (N=327)

Source	DF	Mean Square	F	Significance
Sex	1	141828.99	318.187	.001
Error	325	444.86		
Treatment	1	399.27	7.584	.01
Sex by Treatment	1	83.01	1.58	NS
Error	325	52.64		

Sex		Pre-test	Post-test	Total
Male	N	178	178	
	Mean	102.9	104.9	103.9
	S.D.	21.5	21.9	
Female	N	149	149	
	Mean	91.3	92.3	91.8
	S.D.	17.8	21.2	
Total	N	327	327	
	Mean	97.6	99.2	

*The sum of the first five YDAS content area scores; not included are Myself and Concern for Others.

Table 38

Community Setting
Means, Standard Deviations, and Analysis of Variance
of YDAS Scores for Total Risk*
(N=95)

Source	DF	Mean Square	F	Significance
Sex	1	2736.01	3.644	NS
Error	93	750.85		
Treatment	1	161.18	2.674	NS
Sex by Treatment	1	8.85	0.147	NS
Error	93	60.27		

Sex		Pre-test	Post-test	Total
Male	N	47	47	94.0
	Mean	94.7	93.3	
	S.D.	21.8	23.4	
Female	N	48	48	84.5
	Mean	85.6	83.4	
	S.D.	14.8	18.1	
Total	N	95	95	
	Mean	90.1	88.3	

*The sum of the first five YDAS content area scores; not included are Myself and Concern for Others.

Table 39

School Setting
Means, Standard Deviations, and Analysis of Variance
of YDAS Scores for Drinking and Driving
(N=327)

Source	DF	Mean Square	F	Significance
Sex	1	4269.48	121.91	.001
Error	325	35.02		
Treatment	1	113.96	22.02	.001
Sex by Treatment	1	5.32	1.03	NS
Error	325	5.18		

Sex		Pre-test	Post-test	Total
Male	N	178	178	
	Mean	17.0	17.9	17.5
	S.D.	5.4	5.6	
Female	N	149	149	
	Mean	14.9	15.6	15.3
	S.D.	4.0	4.8	
Total	N	327	327	
	Mean	16.0	16.9	

Table 40
School Setting
Means, Standard Deviations, and Analysis of Variance
of YDAS Scores for Speeding
(N=327)

Source	DF	Mean Square	F	Significance
Sex	1	8251.27	327.47	.001
Error	325	25.20		
Treatment	1	32.15	7.24	.01
Sex by Treatment	1	0.04	0.01	NS
Error	325	4.44		

Sex		Pre-test	Post-test	Total
Male	N	178	178	
	Mean	23.3	22.9	23.1
	S.D.	5.0	5.4	
Female	N	149	149	
	Mean	20.0	19.6	19.8
	S.D.	4.4	5.0	
Total	N	327	327	
	Mean	21.8	21.4	

Table 41
School Setting
Means, Standard Deviations, and Analysis of Variance
of YDAS Scores for Seatbelts
(N=327)

Source	DF	Mean Square	F	Significance
Sex	1	5278.54	76.94	.001
Error	325	68.60		
Treatment	1	29.97	5.84	.025
Sex by Treatment	1	6.66	1.30	NS
Error	325	5.14		

Sex		Pre-test	Post-test	Total
Male	N	178	178	
	Mean	21.2	21.8	21.5
	S.D.	7.1	6.8	
Female	N	149	149	
	Mean	19.4	19.6	19.5
	S.D.	6.1	6.5	
Total	N	327	327	
	Mean	20.4	20.8	

Table 42

School Setting
Means, Standard Deviations, and Analysis of Variance
of YDAS Scores for Safe Driving
(N=327)

Source	DF	Mean Square	F	Significance
Sex	1	6220.63	567.25	.001
Error	325	10.97		
Treatment	1	23.89	5.24	.025
Sex by Treatment	1	1.11	0.24	NS
Error	325	4.56		

Sex		Pre-test	Post-test	Total
Male	N	178	178	
	Mean	21.1	21.5	21.3
	S.D.	4.1	4.1	
Female	N	149	149	
	Mean	18.5	18.8	18.6
	S.D.	3.5	3.9	
Total	N	327	327	
	Mean	19.9	20.3	

Table 43

School Setting
Means, Standard Deviations, and Analysis of Variance
of YDAS Scores for Riding With An Unsafe Driver
(N=327)

Source	DF	Mean Square	F	Significance
Sex	1	4747.16	104.19	.001
Error	325	45.56		
Treatment	1	21.29	3.56	NS
Sex by Treatment	1	11.30	1.89	NS
Error	325	5.98		

Sex		Pre-test	Post-test	Total
Male	N	178	178	
	Mean	20.2	20.8	20.5
	S.D.	5.7	5.8	
Female	N	149	149	
	Mean	18.6	18.7	18.7
	S.D.	5.2	6.0	
Total	N	327	327	
	Mean	19.5	19.8	

Table 44

School Setting
Means, Standard Deviations, and Analysis of Variance
of YDAS Scores for Myself
(N=327)

Source	DF	Mean Square	F	Significance
Sex	1	2139.89	84.44	.001
Error	325	25.34		
Treatment	1	0.44	0.10	NS
Sex by Treatment	1	6.07	1.36	NS
Error	325	4.47		

Sex		Pre-test	Post-test	Total
Male	N	178	178	
	Mean	17.0	17.2	17.1
	S.D.	4.1	4.7	
Female	N	149	149	
	Mean	16.5	16.3	16.4
	S.D.	3.5	4.6	
Total	N	327	327	
	Mean	16.7	16.8	

Table 45

School Setting
Means, Standard Deviations, and Analysis of Variance
of YDAS Scores for Concern for Others
(N=327)

Source	DF	Mean Square	F	Significance
Sex	1	7160.39	421.59	.001
Error	325	16.98		
Treatment	1	21.29	4.26	.05
Sex by Treatment	1	18.50	3.70	NS
Error	325	5.00		

Sex		Pre-test	Post-test	Total
Male	N	178	178	
	Mean	20.0	20.6	20.3
	S.D.	4.5	5.1	
Female	N	149	149	
	Mean	17.0	17.0	17.0
	S.D.	3.4	4.1	
Total	N	327	327	
	Mean	18.6	19.0	

Table 46

Community Setting
Means, Standard Deviations, and Analysis of Variance
of YDAS Scores for Drinking and Driving
(N=95)

Source	DF	Mean Square	F	Significance
Sex	1	79.63	2.37	NS
Error	93	33.55		
Treatment	1	0.05	0.01	NS
Sex by Treatment	1	19.58	4.15	.05
Error	93	4.72		

Sex		Pre-test	Post-test	Total
Male	N	47	47	
	Mean	15.2	15.9	15.6
	S.D.	4.7	5.2	
Female	N	48	48	
	Mean	14.3	13.7	14.0
	S.D.	3.6	3.7	
Total	N	95	95	
	Mean	14.7	14.8	

Table 47

Community Setting
Means, Standard Deviations, and Analysis of Variance
of YDAS Scores for Speeding
(N=95)

Source	DF	Mean Square	F	Significance
Sex	1	186.02	3.53	NS
Error	93	52.73		
Treatment	1	25.79	6.80	.025
Sex by Treatment	1	0.34	0.09	NS
Error	93	3.79		

Sex		Pre-test	Post-test	Total
Male	N	47	47	
	Mean	21.4	20.7	21.1
	S.D.	5.8	6.1	
Female	N	48	48	
	Mean	19.1	18.3	18.8
	S.D.	4.1	4.8	
Total	N	95	95	
	Mean	20.2	19.5	

Table 48

Community Setting
Means, Standard Deviations, and Analysis of Variance
of YDAS Scores for Seatbelts
(N=95)

Source	DF	Mean Square	F	Significance
Sex	1	261.73	4.42	.05
Error	93	59.24		
Treatment	1	0.05	0.008	NS
Sex by Treatment	1	0.89	0.14	NS
Error	93	6.28		

Sex		Pre-test	Post-test	Total
Male	N	47	47	
	Mean	18.4	18.6	18.5
	S.D.	6.7	5.8	
Female	N	48	48	
	Mean	15.9	15.8	15.8
	S.D.	5.0	5.1	
Total	N	95	95	
	Mean	17.1	17.2	

Table 49
Community Setting
Means, Standard Deviations, and Analysis of Variance
of YDAS Scores for Safe Driving
(N=95)

Source	DF	Mean Square	F	Significance
Sex	1	118.42	4.25	.05
Error	93	27.86		
Treatment	1	14.23	2.57	NS
Sex by Treatment	1	9.28	1.68	NS
Error	93	5.53		

Sex		Pre-test	Post-test	Total
Male	N	47	47	
	Mean	20.7	19.7	20.2
	S.D.	4.1	5.1	
Female	N	48	48	
	Mean	18.2	18.1	18.1
	S.D.	3.4	3.4	
Total	N	95	95	
	Mean	19.4	18.9	

Table 50
Community Setting
 Means, Standard Deviations, and Analysis of Variance
 of YDAS Scores for Riding With An Unsafe Driver
 (N=95)

Source	DF	Mean Square	F	Significance
Sex	1	7.21	0.13	NS
Error	93	55.996		
Treatment	1	18.32	1.54	NS
Sex by Treatment	1	0.005	0.00	NS
Error	93	11.93		

Sex		Pre-test	Post-test	Total
Male	N	47	47	
	Mean	19.0	18.3	18.7
	S.D.	5.8	6.2	
Female	N	48	48	
	Mean	18.2	17.6	17.9
	S.D.	5.4	5.8	
Total	N	95	95	
	Mean	18.6	17.9	

Table 51
Community Setting
Means, Standard Deviations, and Analysis of Variance
of YDAS Scores for Myself
(N=95)

Source	DF	Mean Square	F	Significance
Sex	1	27.28	0.91	NS
Error	93	30.03		
Treatment	1	4.13	0.83	NS
Sex by Treatment	1	3.56	0.72	NS
Error	93	4.97		

Sex		Pre-test	Post-test	Total
Male	N	47	47	
	Mean	17.3	17.3	17.3
	S.D.	4.5	4.7	
Female	N	48	48	
	Mean	16.4	15.9	16.2
	S.D.	3.9	3.5	
Total	N	95	95	
	Mean	16.9	16.6	

Table 52

Community Setting
Means, Standard Deviations, and Analysis of Variance
of YDAS Scores for Concern for Others
(N=95)

Source	DF	Mean Square	F	Significance
Sex	1	682.11	18.75	.001
Error	93	36.38		
Treatment	1	2.11	0.66	NS
Sex by Treatment	1	3.56	1.12	NS
Error	93	3.18		

Sex		Pre-test	Post-test	Total
Male	N	47	47	
	Mean	19.8	20.3	20.0
	S.D.	4.4	5.1	
Female	N	48	48	
	Mean	15.9	15.8	15.8
	S.D.	3.9	3.9	
Total	N	95	95	
	Mean	17.8	18.0	

There is one significant interaction, for Drinking and Driving, that indicates that pre-/post increases and risk-taking behavior were greater for males than for females. Otherwise, pre-/post differences were not significant, although showing slight reductions in risk-taking behavior for Speeding, Safe Driving, Riding with an Unsafe Driver, and Myself, and slight increases for Seatbelts and Concern for Others. Sex differences were significant only for Seatbelts, Safe Driving, and Concern for Others, but males had higher risk-prone means on all content area scores. Thus, the results are quite inconclusive in terms of the effect of the intervention. It is interesting to note, however, that male-female differences, although in the same direction, are much smaller than in the school setting.

Curious about the ANOVA results described above, the authors investigated correlations between pre-test and post-test YDAS content area scores. Pre- and post-test correlations for the total group (N=431) were: .85 for speeding; .88 for seatbelts; .72 for safe driving; .80 for drinking and driving; .78 for riding with an unsafe driver; .75 for myself; and .80 for concern for others. Pre- and post-test correlations for males and females were similarly high. These results reassured the authors that responses by students and participants probably were not frivolous (e.g., checking down the middle because of irritation at taking the same YDAS twice within a short period).

As stated earlier, those who participated in the school and community settings were asked to complete behavioral intention questions (Appendix T) given immediately after pre- and post-YDAS administrations. The questions were about future driving behavior, and answers were used primarily as a check of YDAS validity. Frequency distributions of answers were prepared for both "pre" and "post" choices, and the results (in spite of the intervention) were remarkably consistent, but helped to pinpoint the specific choices contributing to change.

In the composite, "pre" to "post" changes suggested safer behavioral intentions after the intervention, especially on the "taking risks" question (Item #1: I am looking forward to taking risks). The greatest changes for this item were in the "maybe" and "definitely no" responses which were 31.2% to 28.2% and 62.3% to 65.3%, respectively (pre- to post-test). The "speeding" question (Item #5: I will drive 10 miles or more over the speed limit to get away from all the slow drivers) had a sizable reduction in the response of "definitely yes," 12.3% to 7.7%. However, Item #4: "I will experiment a bit to find out how well I drive after drinking" went in the other direction. The scores for "definitely yes" and "maybe" were 2.1% to 2.5% and 6.4% to 8.3%, respectively (pre- to post-test). The scores for "definitely no" dropped from 91.1% to 88.7% (pre- to post-test). According to Items 7 and 8, most respondents considered themselves to be safe drivers and optimistic about the future.

In the interest of YDAS validity, a correlational analysis was run for total behavioral intention scores (Items 1-6 of Appendix T) and YDAS

content area scores, for males and females in all settings combined (Table 53). The results showed negative correlations between YDAS content area scores (where a high score means high risk) and the behavioral intention score (where a low score means high risk). For validity, that is as it should be. These correlations were also computed for males and females separately and yielded results similar in direction and magnitude to those for the total group.

Table 53

Total Group
Correlation Between YDAS Content Areas Pre-test/Post-test and
Behavioral Intentions Pre-test/Post-test
(N=322)

YDAS Content Areas	Behavioral Intention Total	
	Pre	Post
Pre		
Speeding	-0.66	-0.33
Seatbelts	-0.49	-0.23
Safe driving	-0.57	-0.28
Drinking and driving	-0.49	-0.21
Riding with an unsafe driver	-0.49	-0.22
Myself	-0.32	-0.16
Concern for others	-0.36	-0.21
Post		
Speeding	-0.64	-0.35
Seatbelts	-0.46	-0.19
Safe driving	-0.49	-0.30
Drinking and driving	-0.46	-0.25
Riding with an unsafe driver	-0.47	-0.23
Myself	-0.36	-0.21
Concern for others	-0.41	-0.19

Tables presenting full details of YDAS content area pre-/post-correlations, the frequency distribution of answer choices to the behavioral intention items of Appendix T, and pre-/post-correlations between YDAS content areas and the intentions of males and females, can be found elsewhere (DeKorp, 1989).

As the authors pondered reasons why overall change through intervention was not more positive, they decided to check whether students and other participants who viewed the intervention more

negatively showed a higher YDAS prescore on a 12-item evaluation form (Appendix AA). Logistics for this comparison limited the combined sample to 200. The correlation of greatest interest related to item 12, "Do you believe the module will influence your driving behavior toward being safer (now or in the future) in relation to drinking and driving, speeding and seatbelt use?" The results showed high scores on YDAS (more risky) associated with low scores on item 12 (more risky). What respondents believe will be true for them in their driving behavior is supported by the YDAS scores. All the other correlations--total group for twelve items and YDAS content areas and same correlates for males and females separately--are reported elsewhere (DeKorp, 1989). They did little to shed light on reasons for pre-/post- YDAS changes (or lack of them) after intervention.

Evaluations by Teachers/Leaders and Students/Participants

Qualitative evaluations, asking people to put to pen and paper their feelings about what they have just experienced, can be very helpful in modifying interventions, and is a well-accepted part of formative evaluation. Therefore, systematic evaluations were gathered from the teachers/leaders and students/participants who took part in the conduct and assessments of the interventions described in the previous pages.

Teachers/Leaders

There was little or no preliminary training of teachers/leaders for pilot-test administration of the interventions. In the school setting, study personnel conducted the program, precluding the necessity for training teachers. However, teachers were given a preliminary form of Appendix V, guidelines for administration of the intervention, so they would be in a better position to understand the rationale for the activities, and to assess their value and make suggestions for improvement. In the community setting, study personnel conducted all activities except for the "Mock DWI Arrest," which was presented by the enforcement officer in his role as leader. Leader Administration Guidelines (preliminary form, Appendix W) were given to the officer for review prior to the scheduled presentation. DWI-arrest procedures are well established by the laws of each state; hence no training was necessary in this regard. If the officer had questions about the guidelines, they were addressed prior to the session.

Following implementation of the intervention, teachers/leaders were asked to review the entire pilot-testing version of the Administration Guidelines, page by page. Their comments, corrections, and suggestions were encouraged. In addition, on Evaluation Forms (Appendix X, teachers; Y, leaders) they responded to specific questions about the Guidelines and to rating scale evaluations of selected aspects of the intervention. Ten teachers and six leaders completed these forms. Each was also asked to complete the "Traffic Safety Communication Rating Scale" (TSCRS) for the film "Just Another Friday Night." Nine teachers and six community leaders did so.

Their suggestions and ratings from all the forms were used wherever appropriate for incorporation in the final version of the Guidelines (Appendices V and W).

The pilot-testing teachers/leaders found the module practicable, valuable, and interesting to students/participants, and thought it likely to serve the objectives for which it was created--positively influencing the at-risk attitudes of the about-to-be driver.

Questions 24-26 of the teacher evaluation form (Appendix X) and 22-24 of the leader evaluation form (Appendix Y) showed responses heavily weighted in a positive direction. When asked specifically whether this intervention would have a positive influence on driving behavior, the responses were overwhelmingly "probably" or "definitely yes," with no, "not a bit," their third response choice.

However, some comments were offered that might in part explain teacher/leader favorable responses vs. the disappointing pre-post YDAS scores. Concern was voiced by some leaders and teachers that, good as it might be, one program would not be enough to have great impact or lasting effect. They felt that much of attitude change would have to be supported by the home environment and by society at large, the latter primarily through laws and enforcement.

As said, teachers and leaders (N=15) were also asked to complete a Traffic Safety Communication Rating Scale (Malfetti, 1986) for the film "Just Another Friday Night"--a major ingredient of the intervention in both school and community settings. Results, found in Appendix Z, are uniformly positive. The film, it seems, is thought of as a well-made, potentially valuable communication directed toward influencing high-risk attitudes.

Students/Participants

Students (N=318) and community participants (N=102) were asked to evaluate the intervention through open-ended questions and rating scales somewhat similar to those completed by teachers. Results are presented in Appendix AA (students) and BB (participants).

Responses reveal that students/participants found the intervention interesting. They say they learned about attitudes and what they would do to avoid dangers for themselves and others. They apparently believe the program will have a positive influence on their future behavior.

Their suggestions for improving the intervention emphasized the need for more time for all activities--except the YDAS post-test; they resented taking the same test twice. In fact, many rushed through the post-test. There is no question that overall time constraints, and the time spent on two YDAS completions and other evaluation forms seriously interfered with opportunity for discussion. There was no chance for student "ownership" of the subject matter, a most helpful aid to learning.

The school and community interventions as they appear in Appendix W and X, respectively, reflect the suggestions and evaluations of teachers/leaders and students/participants, insofar as practicable, and are as far as we can take creation and exploration of interventions in this study.

Discussion and Recommendations

How to explain the disappointing YDAS pre-/post- test results, in view of such good qualitative evaluations by both those conducting and those taking the program?

(1) The 70-item YDAS (Appendix L) appears to be a valid and reliable diagnostic instrument. However, it may not be suitable for pre-/post-application to measure change, especially when administered under the circumstances of this study. If a post-test YDAS seems necessary or desirable, a Form B might well be created from the vast pool of items, with good item data, contained in the preliminary 150-item form.

(2) Attitudes can run deep, and the limited interventions created and applied in this study may not be of adequate substance or allow adequate time to produce quantitatively measured change. They are, however, a systematically evaluated exploratory start, useful as a building block.

(3) The study may have overwhelmed a small intervention with a mass of evaluation forms directed to validity and reliability of the 70-item YDAS, and thereby interfering with attitudinal impact. Clearly, there was inadequate time to process the activities of the intervention. At the very least, evaluation aspects might be spread over a longer period than was possible in this study.

On the positive side, the YDAS is a valid, reliable, and practicable instrument for diagnosing the attitudes toward risk of beginning drivers or those about to be drivers, before there is opportunity for them to reinforce any faulty attitudes by acting them out on the road. A teacher or leader can direct specific interventions to an individual or group possessing faulty attitudes, instead of treating all beginning drivers as if they all needed the same type of preparation or correction.

The 70-item YDAS could also be presented in a self-assessment format, wherein young people could provide and interpret their answers in a non-threatening environment, directing them to ways to remedy any shortcomings revealed.

The exploratory interventions were well-regarded by those conducting them or experiencing them. This is a real step forward, for neither teachers nor students (especially adolescents) are known to be generous with praise. With more time and less evaluative baggage, the interventions might have potential for impact on risk-taking attitudes in the three areas of greatest concern--drinking and driving, speeding, and non-use of seatbelts.

As this report reveals, this study included many people and regions of the United States and Canada. Only a portion of the many details of the creation and application of the YDAS and the exploratory interventions are provided herein. Many more details including implications and recommendations for procedural change for future experimentation are found in Rose (1989) and DeKorp (1989). The problem addressed--the risk-taking attitudes of young drivers--is too important to be left at this juncture.

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APPENDIX A

INSTRUCTIONS FOR RATING OF PRELIMINARY ITEMS OF YDAS

Attached are the items for the Young Driver Attitude Scale. There are eight behavioral categories: 1) Seatbelts, 2) Speeding, 3) Safe Driving, 4) Drinking and Driving, 5) Concern for Others, 6) Riding with an Unsafe Driver, 7) Beer, and 8) Myself. There is a list of items for each category. Please rate each item carefully by circling the number which shows where you place it on a five-position continuum from "Not at all important" <-----> to "Very important." In each case, make your decision on the basis of your thoughts about the item's importance in measuring the attitudes of young about-to-be drivers.

APPENDIX B
INSTRUCTIONS FOR EDITING ITEMS SELECTED FOR YDAS

Attached are the items selected for the first administration of the Young Driver Attitude Scale. There are 20 items for each of the seven behavioral categories: 1) Seatbelts, 2) Speeding, 3) Safe Driving, 4) Drinking and Driving, 5) Concern for Others, 6) Riding with an Unsafe Driver, and 7) Myself. There is an additional behavioral category entitled "Beer." Ultimately, "Beer" items will be combined with those under "Drinking and Driving."

The items were selected from the initial set of approximately 40 items per behavioral category, previously rated. The selection was based on the following criteria: 1) rating means, 2) content and coverage, and 3) attitudinal orientation vs. behavioral intention. Please edit these items as you see fit, keeping in mind that the goal is to present the best possible items in terms of clarity of language and of the principles of diagnostic instrument construction.

Please write your modifications of these items and your comments directly on the sheets and return them to me as soon as you can. Comments will be synthesized and used to prepare the items in final form for the first field testing.

APPENDIX C

PART ONE: PRELIMINARY (150-ITEM) FORM OF YOUNG DRIVER ATTITUDE SCALE

Please read the following items carefully. Record your immediate reaction by marking an "X" in the parentheses which best describes the extent of your agreement with the item, or disagreement.

ITEM	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
1. Speeding is dangerous no matter what the driving conditions are.	()	()	()	()
2. A person should buy a car for its safety more than its looks.	()	()	()	()
3. I can (or think I could) drive safely after a couple of drinks.	()	()	()	()
4. I don't (or wouldn't) drink and drive because I don't want to hurt anyone.	()	()	()	()
5. Not wearing a seatbelt is just plain stupid.	()	()	()	()
6. I definitely would not get into a car with a driver who has been drinking.	()	()	()	()
7. I would drive carefully mostly to stay out of trouble with the police.	()	()	()	()
8. I don't need anybody to tell me when they think I've had enough to drink.	()	()	()	()
9. I'm still learning to be a good driver.	()	()	()	()
10. If you have just one or two beers while driving, it's O.K.	()	()	()	()

ITEM	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
11. I don't like to wear seatbelts.	()	()	()	()
12. I like (or would) like to race with other drivers.	()	()	()	()
13. It makes me feel good when I am courteous to other drivers.	()	()	()	()
14. I would ride with drivers who speed if they know how to handle a car.	()	()	()	()
15. I know that I am not doing anything wrong, but lots of others are.	()	()	()	()
16. Beer is less intoxicating than hard liquor.	()	()	()	()
17. Seatbelts don't really protect you in an accident.	()	()	()	()
18. You've got to be an idiot to race when driving.	()	()	()	()
19. I don't (or won't) take chances when I'm driving.	()	()	()	()
20. A good driver would not drink at all before driving.	()	()	()	()
21. I make (or would make) my passengers buckle-up because it's the law, not because I'm concerned with their safety.	()	()	()	()
22. Riding with an unsafe driver usually is avoidable.	()	()	()	()
23. I am (or will be) a much better driver than just about anybody else my age.	()	()	()	()
24. I would feel bad if people were hurt in an accident in my car because I didn't ask them to put on their seatbelts.	()	()	()	()

ITEM	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
25. I would get in the car with a driver who has been drinking if I knew and trusted him or her.	()	()	()	()
26. When I compare myself to other people I feel satisfied.	()	()	()	()
27. You're less likely to be picked up for DWI if you drink beer.	()	()	()	()
28. Wearing a seatbelt makes me feel safe.	()	()	()	()
29. I get (or think I will get) a high from driving fast.	()	()	()	()
30. It's O.K. to drink beer before driving because it doesn't really have that much alcohol.	()	()	()	()
31. I am not worried about causing an accident because I know I am (or will be) a good driver.	()	()	()	()
32. I drive (or would drive) more cautiously than usual when kids are in the car.	()	()	()	()
33. I like myself and my life.	()	()	()	()
34. If I wear a seatbelt, it makes me look like a wimp.	()	()	()	()
35. Even though someone may often speed, he or she can still be a safe driver.	()	()	()	()
36. All alcohol is dangerous when you are driving.	()	()	()	()
37. Seatbelts should be worn even on short trips.	()	()	()	()
38. Slow drivers are a real pain.	()	()	()	()

ITEM	STRONGLY			STRONGLY
	AGREE	AGREE	DISAGREE	DISAGREE
39. You should drive carefully because you want to live, not because you are afraid of getting a ticket.	()	()	()	()
40. It's O.K. to drive if you have one or two drinks and you feel in control.	()	()	()	()
41. I am not (or would not be) really concerned about others on the road, just so long as they stay out of my way.	()	()	()	()
42. I feel driving is an art that takes time to master.	()	()	()	()
43. I can (or could) drive when I'm high on marijuana because it doesn't make me lose control of myself.	()	()	()	()
44. Good drivers don't need to wear seatbelts.	()	()	()	()
45. I don't feel comfortable in a car unless I have my seatbelt on.	()	()	()	()
46. If you have good skills, speeding is O.K.	()	()	()	()
47. I love (or will love) to show off when I'm driving.	()	()	()	()
48. I would try to talk my friends out of driving drunk, but if they don't want to listen, that's their problem.	()	()	()	()
49. Being involved in a car accident would make me become a much better driver.	()	()	()	()
50. I would get into my friend's car even though she/he is known to be an unsafe driver.	()	()	()	()

ITEM	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
51. I am (or will be) a confident driver to impress myself, not other people.	()	()	()	()
52. Beer is just as illegal as any other alcohol while driving.	()	()	()	()
53. Sometimes seatbelts do more harm than good.	()	()	()	()
54. I usually (or will usually) drive faster when my friends are in the car.	()	()	()	()
55. I would not drive my car until everyone in it has fastened their seatbelts.	()	()	()	()
56. Cops watch for speeders so they can give their quota of tickets and collect fines.	()	()	()	()
57. Hurting someone else with my car would scar me for life.	()	()	()	()
58. I would not get into the car under any circumstances with a known reckless and fast driver.	()	()	()	()
59. When I compare myself to other people, I realize I have a lot to learn about driving.	()	()	()	()
60. Drunk driving is unlawful and whoever doesn't obey this law should be punished severely.	()	()	()	()
61. I am (or would be) very careful when I drive because I'm afraid something or someone might run out in front of me.	()	()	()	()
62. I would get in the car with a reckless driver if I had no other way to get home.	()	()	()	()

ITEM	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
63. I don't (or won't) drive cautiously because when I do I feel as if it inhibits my freedom.	()	()	()	()
64. I've seen drinking and driving cause problems for other people, but it doesn't bother me at all.	()	()	()	()
65. The seatbelt law is too harsh.	()	()	()	()
66. It is fun to drive fast.	()	()	()	()
67. Cruising is fun and exciting.	()	()	()	()
68. I don't like people who drink and drive.	()	()	()	()
69. I don't think of others because if I do that's when I would get into accidents.	()	()	()	()
70. I drive (or will drive) the way I want to, nobody tells me how.	()	()	()	()
71. I am not going to be an aggressive driver.	()	()	()	()
72. I couldn't live with myself if I hurt another human being.	()	()	()	()
73. I would probably ride with a friend who had been drinking if I trusted him or her.	()	()	()	()
74. I think I am (or will be) a good driver, but I need more experience.	()	()	()	()
75. Beer is just as dangerous as any other alcohol.	()	()	()	()
76. There should be tougher laws to enforce the wearing of seatbelts.	()	()	()	()

ITEM	STRONGLY			STRONGLY
	AGREE	AGREE	DISAGREE	DISAGREE
77. Just because you don't get caught speeding doesn't make it right.	()	()	()	()
78. You should always obey laws while driving.	()	()	()	()
79. Even though I know it can be dangerous to drink and drive, I would do so anyway in most cases.	()	()	()	()
80. The roads should be like life: "Everyone for himself."	()	()	()	()
81. I would ask my friend to let me out of the car immediately if she/he drove recklessly.	()	()	()	()
82. I may be (or will be) a good driver for my age, but being a good driver really comes with experience.	()	()	()	()
83. If a friend has been drinking beer, I would warn him/her not to drive.	()	()	()	()
84. I would wear a seatbelt because I want to, not because the law says so.	()	()	()	()
85. Beer doesn't get you drunk, it only makes you sleepy.	()	()	()	()
86. I may be (or will be) a good driver but I still worry about accidents because no one is perfect.	()	()	()	()
87. I would ride home with a friend who has been drinking to keep him or her out of trouble.	()	()	()	()

ITEM	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
88. It usually doesn't pay to be concerned about others because most others aren't concerned about me.	()	()	()	()
89. Driving sobers you up if you've had a drink or two.	()	()	()	()
90. When I drive I would like to be different--not an ordinary cautious driver.	()	()	()	()
91. It's O.K. to speed if you have a radar detector and can get away with it.	()	()	()	()
92. As a passenger, I would not put on a seatbelt because then the driver might think I do not trust him or her.	()	()	()	()
93. Driving 5 or 10 miles above the speed limit is O.K. because everyone does it.	()	()	()	()
94. I drive (or will drive) more carefully when there is someone in the car with me.	()	()	()	()
95. Having a couple of drinks or a few "tokes" of marijuana make me (or would make me) a better driver.	()	()	()	()
96. The highways are another place where it is important to show "I am my brother's keeper."	()	()	()	()
97. I would not even consider riding with a drunk person.	()	()	()	()
98. I care about myself and other people so I'm going to be a good driver.	()	()	()	()
99. Beer is not good for your driving.	()	()	()	()

ITEM	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
100. I know how much seatbelts help in accidents, but I wouldn't wear them if it weren't the law.	()	()	()	()
101. I think it's O.K. to speed if the traffic conditions allow you to do so.	()	()	()	()
102. I don't usually wear a seatbelt because when I do I feel strapped in.	()	()	()	()
103. I usually trust the judgment of persons who have been drinking about whether they can drive safely.	()	()	()	()
104. If I cause an accident because of stupidity, I hope I'm the one who gets hurt.	()	()	()	()
105. My friends will not accept me if I refuse to get in the car with a drunk driver.	()	()	()	()
106. I am content with myself.	()	()	()	()
107. I am or will be a cautious driver.	()	()	()	()
108. You lose friends if you make them wear their seatbelt.	()	()	()	()
109. If you are mad, driving fast is a good way to loosen up.	()	()	()	()
110. Getting a traffic ticket would cause me to be a better driver.	()	()	()	()
111. Only an idiot would drive drunk.	()	()	()	()
112. If I cause an accident because of stupidity, I hope I'm the one who gets hurt.	()	()	()	()

ITEM	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
113. Getting into a car with an unsafe driver is stupid and just asking for trouble.	()	()	()	()
114. I am (or will be) a cautious driver.	()	()	()	()
115. Seatbelts are pushed because of all the people who make money from them.	()	()	()	()
116. I like (or will like) to show off my skill by driving fast.	()	()	()	()
117. Safe driving can cause accidents if you are overly cautious.	()	()	()	()
118. If I had a lot on my mind, a drink or two would help me get my head together before driving.	()	()	()	()
119. I obey (or would obey) all laws when kids are with me because I want them to grow up to be safe drivers.	()	()	()	()
120. I might get in the car with a driver who has been drinking.	()	()	()	()
121. I feel (or will feel) good when I drive and show good driving manners.	()	()	()	()
122. People should be sent to jail for not wearing seatbelts.	()	()	()	()
123. Most of the speed limits are set too low.	()	()	()	()
124. Safe driving is too "goody-goody" and loses friends.	()	()	()	()
125. I think they exaggerate the risk of getting in an accident due to drinking and driving.	()	()	()	()

ITEM	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
126. It is inexcusable to take a human or animal life because of one's carelessness.	()	()	()	()
127. I might get in the car with a driver who is intoxicated.	()	()	()	()
128. I feel that I am a good person.	()	()	()	()
129. Police officers watch out for speeders in order to make the roadway safe.	()	()	()	()
130. Cruising is "kid stuff."	()	()	()	()
131. A person should never drink and then drive.	()	()	()	()
132. I hope I never get into an accident where someone is hurt and it is my fault.	()	()	()	()
133. I would never ride with an unsafe driver.	()	()	()	()
134. I feel my driving needs a lot of improvement.	()	()	()	()
135. Girls like guys who speed when driving.	()	()	()	()
136. A real friend doesn't let a friend drive drunk.	()	()	()	()
137. If I hurt someone because of my driving, I never want to drive again.	()	()	()	()
138. I would never put my life in the hands of a driver who is intoxicated.	()	()	()	()
139. I will have to be more cautious than the other drivers because I'm younger.	()	()	()	()
140. Speeding never killed anybody who knows how to handle a car.	()	()	()	()

ITEM	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
141. Safe driving is more for old people than for young people.	()	()	()	()
142. A couple of drinks may relax you but it won't make you a better driver.	()	()	()	()
143. If the person I hit was at fault, I probably wouldn't feel so bad.	()	()	()	()
144. I would get in the car with an intoxicated person if my friends did.	()	()	()	()
145. I am satisfied with who I am.	()	()	()	()
146. Speed traps are more for letting cops show their power than they are for safety.	()	()	()	()
147. Drunk drivers who kill people should be given the death penalty.	()	()	()	()
148. Drivers who pay too much attention to the rules get on my nerves, and I hate to ride with them.	()	()	()	()
149. Safe drivers are usually "wimps."				
150. I would rather walk a hundred miles than get in a car with an unsafe driver.	()	()	()	()

APPENDIX D

TABLE OF SPECIFICATIONS FOR PRELIMINARY FORM OF YDAS

Content Areas	Number of Items per Category	Items Numbers
1. Speeding	20	1,12,18,29,38,77,91,93,101, 54,135,109,66,116,123,46, 129,140,146,56
2. Seatbelts	20	5,11,17,34,55,45,37,76,44, 28,84,92,53,24,100,102,108, 65,115,122
3. Safe Driving	20	19,141,31,35,78,47,7,90,94, 149,39,70,110,63,2,117,124, 49,67,130
4. Drinking and Driving	20	3,20,64,68,30,79,131,40,89, 95,103,136,8,60,111,118,125, 142,43,147
5. Riding With An Unsafe Driver	20	6,14,22,25,58,73,50,81,87, 97,133,62,105,113,120,127, 138,144,148,150
6. Myself	20	9,15,23,26,59,42,71,51,33, 82,86,74,98,106,114,121,128, 134,139,145
7. Concern for Others	20	4,13,21,32,41,48,57,72,80, 88,61,96,69,104,112,119,126, 132,137,143
8. Beer	10	10,16,27,36,75,52,83,85,99 107

Total Number of Items = 150

APPENDIX E

FOUR SEMANTIC DIMENSIONS AND SIXTEEN BIPOLAR ADJECTIVE SCALES--
FOUR FOR EACH DIMENSION

DIMENSION	BIPOLAR ADJECTIVES
Evaluative	Pleasant.....Unpleasant Good.....Bad Wise.....Foolish Safe.....Unsafe
Activity	Youthful.....Old Hot.....Cold Fast.....Slow Alive.....Dead
Potency	Hard.....Soft Thick.....Thin Large.....Small High.....Low
Stability	Stable.....Changeable Calm.....Excitable Careful.....Careless Sure.....Uncertain

APPENDIX F

PART TWO: SEMANTIC DIFFERENTIAL

Certain words or phrases may bring first impressions and associations to your mind. Please rate the following words or phrases on a 7-position scale like the following:

Suppose the word is "AUTOMOBILE"--if you feel that on the scale "QUIET... NOISY," "AUTOMOBILE" is very closely associated with "NOISY," you would make an (X) as follows:

AUTOMOBILE

QUIET () () () () () () () (X) NOISY

On the other hand, if you feel that "AUTOMOBILE" is slightly associated with "QUIET," you would mark an (X) as follows:

QUIET () () (X) () () () () () NOISY

If "AUTOMOBILE" does not seem to you to be associated more with one end of the scale than with the other, you would mark an (X) as follows:

QUIET () () () (X) () () () () NOISY

There are no right or wrong answers. The meaning that a particular word or phrase has for you is described by the (X) you place in any one of the 7 spaces on each of the scales.

Please work as rapidly as you can. Do not look for clear understanding. Often a general impression will be all you have to go on.

Please complete all scales for the following nine sets of words or phrases.

SAFE DRIVING

Pleasant	(	)	(	)	(	)	(	)	(	)	(	)	Unpleasant
Good	(	)	(	)	(	)	(	)	(	)	(	)	Bad
Wise	(	)	(	)	(	)	(	)	(	)	(	)	Foolish
Safe	(	)	(	)	(	)	(	)	(	)	(	)	Unsafe
Youthful	(	)	(	)	(	)	(	)	(	)	(	)	Old
Hot	(	)	(	)	(	)	(	)	(	)	(	)	Cold
Fast	(	)	(	)	(	)	(	)	(	)	(	)	Slow
Alive	(	)	(	)	(	)	(	)	(	)	(	)	Dead
Hard	(	)	(	)	(	)	(	)	(	)	(	)	Soft
Thick	(	)	(	)	(	)	(	)	(	)	(	)	Thin
Large	(	)	(	)	(	)	(	)	(	)	(	)	Small
High	(	)	(	)	(	)	(	)	(	)	(	)	Low
Stable	(	)	(	)	(	)	(	)	(	)	(	)	Changeable
Calm	(	)	(	)	(	)	(	)	(	)	(	)	Excitable
Careful	(	)	(	)	(	)	(	)	(	)	(	)	Careless
Sure	(	)	(	)	(	)	(	)	(	)	(	)	Uncertain

SPEEDING

Pleasant	(	)	(	)	(	)	(	)	(	)	(	)	Unpleasant
Good	(	)	(	)	(	)	(	)	(	)	(	)	Bad
Wise	(	)	(	)	(	)	(	)	(	)	(	)	Foolish
Safe	(	)	(	)	(	)	(	)	(	)	(	)	Unsafe
Youthful	(	)	(	)	(	)	(	)	(	)	(	)	Old
Hot	(	)	(	)	(	)	(	)	(	)	(	)	Cold
Fast	(	)	(	)	(	)	(	)	(	)	(	)	Slow
Alive	(	)	(	)	(	)	(	)	(	)	(	)	Dead
Hard	(	)	(	)	(	)	(	)	(	)	(	)	Soft
Thick	(	)	(	)	(	)	(	)	(	)	(	)	Thin
Large	(	)	(	)	(	)	(	)	(	)	(	)	Small
High	(	)	(	)	(	)	(	)	(	)	(	)	Low
Stable	(	)	(	)	(	)	(	)	(	)	(	)	Changeable
Calm	(	)	(	)	(	)	(	)	(	)	(	)	Excitable
Careful	(	)	(	)	(	)	(	)	(	)	(	)	Careless
Sure	(	)	(	)	(	)	(	)	(	)	(	)	Uncertain

DRINKING AND DRIVING

Pleasant	(	)	(	)	(	)	(	)	(	)	(	)	Unpleasant
Good	(	)	(	)	(	)	(	)	(	)	(	)	Bad
Wise	(	)	(	)	(	)	(	)	(	)	(	)	Foolish
Safe	(	)	(	)	(	)	(	)	(	)	(	)	Unsafe
Youthful	(	)	(	)	(	)	(	)	(	)	(	)	Old
Hot	(	)	(	)	(	)	(	)	(	)	(	)	Cold
Fast	(	)	(	)	(	)	(	)	(	)	(	)	Slow
Alive	(	)	(	)	(	)	(	)	(	)	(	)	Dead
Hard	(	)	(	)	(	)	(	)	(	)	(	)	Soft
Thick	(	)	(	)	(	)	(	)	(	)	(	)	Thin
Large	(	)	(	)	(	)	(	)	(	)	(	)	Small
High	(	)	(	)	(	)	(	)	(	)	(	)	Low
Stable	(	)	(	)	(	)	(	)	(	)	(	)	Changeable
Calm	(	)	(	)	(	)	(	)	(	)	(	)	Excitable
Careful	(	)	(	)	(	)	(	)	(	)	(	)	Careless
Sure	(	)	(	)	(	)	(	)	(	)	(	)	Uncertain

CONCERN FOR OTHERS

Pleasant	(	)	(	)	(	)	(	)	(	)	(	)	Unpleasant
Good	(	)	(	)	(	)	(	)	(	)	(	)	Bad
Wise	(	)	(	)	(	)	(	)	(	)	(	)	Foolish
Safe	(	)	(	)	(	)	(	)	(	)	(	)	Unsafe
Youthful	(	)	(	)	(	)	(	)	(	)	(	)	Old
Hot	(	)	(	)	(	)	(	)	(	)	(	)	Cold
Fast	(	)	(	)	(	)	(	)	(	)	(	)	Slow
Alive	(	)	(	)	(	)	(	)	(	)	(	)	Dead
Hard	(	)	(	)	(	)	(	)	(	)	(	)	Soft
Thick	(	)	(	)	(	)	(	)	(	)	(	)	Thin
Large	(	)	(	)	(	)	(	)	(	)	(	)	Small
High	(	)	(	)	(	)	(	)	(	)	(	)	Low
Stable	(	)	(	)	(	)	(	)	(	)	(	)	Changeable
Calm	(	)	(	)	(	)	(	)	(	)	(	)	Excitable
Careful	(	)	(	)	(	)	(	)	(	)	(	)	Careless
Sure	(	)	(	)	(	)	(	)	(	)	(	)	Uncertain

RIDING WITH AN UNSAFE DRIVER

Pleasant	(	)	(	)	(	)	(	)	(	)	(	)	Unpleasant
Good	(	)	(	)	(	)	(	)	(	)	(	)	Bad
Wise	(	)	(	)	(	)	(	)	(	)	(	)	Foolish
Safe	(	)	(	)	(	)	(	)	(	)	(	)	Unsafe
Youthful	(	)	(	)	(	)	(	)	(	)	(	)	Old
Hot	(	)	(	)	(	)	(	)	(	)	(	)	Cold
Fast	(	)	(	)	(	)	(	)	(	)	(	)	Slow
Alive	(	)	(	)	(	)	(	)	(	)	(	)	Dead
Hard	(	)	(	)	(	)	(	)	(	)	(	)	Soft
Thick	(	)	(	)	(	)	(	)	(	)	(	)	Thin
Large	(	)	(	)	(	)	(	)	(	)	(	)	Small
High	(	)	(	)	(	)	(	)	(	)	(	)	Low
Stable	(	)	(	)	(	)	(	)	(	)	(	)	Changeable
Calm	(	)	(	)	(	)	(	)	(	)	(	)	Excitable
Careful	(	)	(	)	(	)	(	)	(	)	(	)	Careless
Sure	(	)	(	)	(	)	(	)	(	)	(	)	Uncertain

SEATBELTS

Pleasant	(	)	(	)	(	)	(	)	(	)	(	)	Unpleasant
Good	(	)	(	)	(	)	(	)	(	)	(	)	Bad
Wise	(	)	(	)	(	)	(	)	(	)	(	)	Foolish
Safe	(	)	(	)	(	)	(	)	(	)	(	)	Unsafe
Youthful	(	)	(	)	(	)	(	)	(	)	(	)	Old
Hot	(	)	(	)	(	)	(	)	(	)	(	)	Cold
Fast	(	)	(	)	(	)	(	)	(	)	(	)	Slow
Alive	(	)	(	)	(	)	(	)	(	)	(	)	Dead
Hard	(	)	(	)	(	)	(	)	(	)	(	)	Soft
Thick	(	)	(	)	(	)	(	)	(	)	(	)	Thin
Large	(	)	(	)	(	)	(	)	(	)	(	)	Small
High	(	)	(	)	(	)	(	)	(	)	(	)	Low
Stable	(	)	(	)	(	)	(	)	(	)	(	)	Changeable
Calm	(	)	(	)	(	)	(	)	(	)	(	)	Excitable
Careful	(	)	(	)	(	)	(	)	(	)	(	)	Careless
Sure	(	)	(	)	(	)	(	)	(	)	(	)	Uncertain

MYSELF

Pleasant	(	)	(	)	(	)	(	)	(	)	(	)	Unpleasant
Good	(	)	(	)	(	)	(	)	(	)	(	)	Bad
Wise	(	)	(	)	(	)	(	)	(	)	(	)	Foolish
Safe	(	)	(	)	(	)	(	)	(	)	(	)	Unsafe
Youthful	(	)	(	)	(	)	(	)	(	)	(	)	Old
Hot	(	)	(	)	(	)	(	)	(	)	(	)	Cold
Fast	(	)	(	)	(	)	(	)	(	)	(	)	Slow
Alive	(	)	(	)	(	)	(	)	(	)	(	)	Dead
Hard	(	)	(	)	(	)	(	)	(	)	(	)	Soft
Thick	(	)	(	)	(	)	(	)	(	)	(	)	Thin
Large	(	)	(	)	(	)	(	)	(	)	(	)	Small
High	(	)	(	)	(	)	(	)	(	)	(	)	Low
Stable	(	)	(	)	(	)	(	)	(	)	(	)	Changeable
Calm	(	)	(	)	(	)	(	)	(	)	(	)	Excitable
Careful	(	)	(	)	(	)	(	)	(	)	(	)	Careless
Sure	(	)	(	)	(	)	(	)	(	)	(	)	Uncertain

BEER

Pleasant	(	)	(	)	(	)	(	)	(	)	(	)	Unpleasant
Good	(	)	(	)	(	)	(	)	(	)	(	)	Bad
Wise	(	)	(	)	(	)	(	)	(	)	(	)	Foolish
Safe	(	)	(	)	(	)	(	)	(	)	(	)	Unsafe
Youthful	(	)	(	)	(	)	(	)	(	)	(	)	Old
Hot	(	)	(	)	(	)	(	)	(	)	(	)	Cold
Fast	(	)	(	)	(	)	(	)	(	)	(	)	Slow
Alive	(	)	(	)	(	)	(	)	(	)	(	)	Dead
Hard	(	)	(	)	(	)	(	)	(	)	(	)	Soft
Thick	(	)	(	)	(	)	(	)	(	)	(	)	Thin
Large	(	)	(	)	(	)	(	)	(	)	(	)	Small
High	(	)	(	)	(	)	(	)	(	)	(	)	Low
Stable	(	)	(	)	(	)	(	)	(	)	(	)	Changeable
Calm	(	)	(	)	(	)	(	)	(	)	(	)	Excitable
Careful	(	)	(	)	(	)	(	)	(	)	(	)	Careless
Sure	(	)	(	)	(	)	(	)	(	)	(	)	Uncertain

SELF CONFIDENCE

Pleasant	(	)	(	)	(	)	(	)	(	)	(	)	Unpleasant
Good	(	)	(	)	(	)	(	)	(	)	(	)	Bad
Wise	(	)	(	)	(	)	(	)	(	)	(	)	Foolish
Safe	(	)	(	)	(	)	(	)	(	)	(	)	Unsafe
Youthful	(	)	(	)	(	)	(	)	(	)	(	)	Old
Hot	(	)	(	)	(	)	(	)	(	)	(	)	Cold
Fast	(	)	(	)	(	)	(	)	(	)	(	)	Slow
Alive	(	)	(	)	(	)	(	)	(	)	(	)	Dead
Hard	(	)	(	)	(	)	(	)	(	)	(	)	Soft
Thick	(	)	(	)	(	)	(	)	(	)	(	)	Thin
Large	(	)	(	)	(	)	(	)	(	)	(	)	Small
High	(	)	(	)	(	)	(	)	(	)	(	)	Low
Stable	(	)	(	)	(	)	(	)	(	)	(	)	Changeable
Calm	(	)	(	)	(	)	(	)	(	)	(	)	Excitable
Careful	(	)	(	)	(	)	(	)	(	)	(	)	Careless
Sure	(	)	(	)	(	)	(	)	(	)	(	)	Uncertain

APPENDIX G

PART THREE: FUTURE DRIVING BEHAVIOR

Please complete each of the following items (1-8) by marking an "X" in the appropriate parentheses (1-6), or circling the chosen response (items 7-8).

1. I am looking forward to taking risks.
 Definitely yes () Maybe () Definitely no ()
2. I am anxious to race other drivers.
 Definitely yes () Maybe () Definitely no ()
3. Once I have (or now that I have) my license I can stop wearing my seatbelt.
 Definitely yes () Maybe () Definitely no ()
4. I will experiment a bit to find out how well I drive after drinking.
 Definitely yes () Maybe () Definitely no ()
5. I will drive 10 miles or more over the speed limit to get away from all the slow drivers.
 Definitely yes () Maybe () Definitely no ()
6. I think it is O.K. to drive after drinking a couple of beers.
 Definitely yes () Maybe () Definitely no ()

* * * * *

7. Which of the following best describes how you rate yourself as a driver, now or after you are licensed?
 (Circle one) a) Extremely Safe d) Unsafe
 b) Very Safe e) Very Unsafe
 c) Safe f) Extremely Unsafe
8. Which of the following best describes your outlook about the future?
 (Circle one) a) Extremely Optimistic d) Pessimistic
 b) Very Optimistic e) Very Pessimistic
 c) Optimistic f) Extremely Pessimistic

APPENDIX H

PART FOUR: PERSONAL INFORMATION

Please complete each of the following items (A-G) by filling in the blank or marking an "X" in the appropriate space.

- [illegible]

APPENDIX I

PART FIVE: IMPRESSIONS AND STATEMENTS

Please complete each of the following items (1-39) by marking an "X" in the appropriate parentheses.

	ALWAYS	USUALLY	SOMETIMES	RARELY	NEVER
1. Policemen are sincere in enforcing the laws.	()	()	()	()	()
2. My parents are reasonable in their relations with me.	()	()	()	()	()
3. My community is a happy place to live.	()	()	()	()	()
4. I put off until tomorrow things I should do today.	()	()	()	()	()
5. I like to daydream.	()	()	()	()	()
6. I feel full of pep when I get behind the wheel.	()	()	()	()	()
7. I live in a home that is happy.	()	()	()	()	()
8. Over-careful drivers cause more accidents than the so-called reckless ones.	()	()	()	()	()
9. I get a feeling of real power when driving a car.	()	()	()	()	()
10. Courses in school (any grade level) are set up to meet the needs and interests of the student.	()	()	()	()	()
11. I am concerned about the way my clothes look.	()	()	()	()	()
12. Accidents don't just happen; they are caused.	()	()	()	()	()

	ALWAYS	USUALLY	SOMETIMES	RARELY	NEVER
13. I like to get everything out of a car that it can give.	()	()	()	()	()
14. My parents exert too much control over me.	()	()	()	()	()
15. I have been tempted to cheat on a test.	()	()	()	()	()
16. Drivers should be given more freedom in obeying traffic signs.	()	()	()	()	()
17. People should drive when they are angry.	()	()	()	()	()
18. I like to put extras on my car to attract attention.	()	()	()	()	()
19. I am popular with most of the students in my class.	()	()	()	()	()
20. Teachers want to help students with their problems.	()	()	()	()	()
21. The principal driver in my family gets traffic tickets for moving violations.	()	()	()	()	()
22. I have been wrong in an argument but wouldn't admit it to my opponent.	()	()	()	()	()
23. Society should have the right to question the way I drive.	()	()	()	()	()
24. I like to razz a team when it is losing.	()	()	()	()	()
25. I am proud of my reputation in the community.	()	()	()	()	()
26. I am considered a friendly person.	()	()	()	()	()

	ALWAYS	USUALLY	SOMETIMES	RARELY	NEVER
27. I like most of my work.	()	()	()	()	()
28. Our family spends a great deal of time together.	()	()	()	()	()
29. I like to take chances when I'm driving.	()	()	()	()	()
30. Traffic laws are set up to promote safety.	()	()	()	()	()
31. Courtesy toward other drivers is important.	()	()	()	()	()
32. My grades in school are a good indication of my ability.	()	()	()	()	()
33. I become concerned about what other people think of me.	()	()	()	()	()
34. I think courtesy toward others is a good reflection of a person's character.	()	()	()	()	()
35. The police are only trying to do the job for which they were hired.	()	()	()	()	()
36. My folks insist that I spend most weekday evenings at home.	()	()	()	()	()
37. I am considered a reliable person.	()	()	()	()	()
38. I like to help a person who is in trouble.	()	()	()	()	()
39. I am more courteous than the average driver.	()	()	()	()	()

APPENDIX J

PROCEDURES FOR ADMINISTRATION OF THE YDAS

For consistency in administration of the Young Driver Attitude Scale, the following procedures should be followed.

PROCEDURES

1. Introduce yourself.
2. Inform participants that they have been asked to take part in a young-driver study that requires completion of a survey.
3. Read the following brief statement:

The purpose of this study is to help us understand the differing ways young people view driving. Since most of you will soon be or already are licensed drivers, your contribution to this research will be very valuable.
4. Give complete survey packet to all participants.
5. Read along with participants, or simply read to participants, the face sheet titled Young Drivers. When you get to the description of the five parts, turn to each of them and read aloud the directions to be sure participants are clear about them.
6. Tell participants not to put their names on the survey. Emphasize that their responses are confidential and that this is a survey, not a test to be scored or graded.
7. Collect and place the completed surveys in the envelopes provided.
8. Thank participants for their cooperation in this important effort, and tell them about whatever recognition is planned. For example, their cooperation as a group will be acknowledged in the published results.

APPENDIX K

SEVEN POSITION SCALE AND ADJECTIVES INDICATING DIRECTION FOR
SCORING PURPOSES

S*	<u>Pleasant</u>	(	)	(	)	(	)	(	)	(	)	(	)	Unpleasant
A	<u>Good</u>	(	)	(	)	(	)	(	)	(	)	(	)	Bad
P	<u>Wise</u>	(	)	(	)	(	)	(	)	(	)	(	)	Foolish
E	<u>Safe</u>	(	)	(	)	(	)	(	)	(	)	(	)	Unsafe
S	<u>Youthful</u>	(	)	(	)	(	)	(	)	(	)	(	)	Old
A	<u>Hot</u>	(	)	(	)	(	)	(	)	(	)	(	)	Cold
P	<u>Fast</u>	(	)	(	)	(	)	(	)	(	)	(	)	Slow
E	<u>Alive</u>	(	)	(	)	(	)	(	)	(	)	(	)	Dead
S	<u>Hard</u>	(	)	(	)	(	)	(	)	(	)	(	)	Soft
A	<u>Thick</u>	(	)	(	)	(	)	(	)	(	)	(	)	Thin
P	<u>Large</u>	(	)	(	)	(	)	(	)	(	)	(	)	Small
E	<u>High</u>	(	)	(	)	(	)	(	)	(	)	(	)	Low
S	<u>Stable</u>	(	)	(	)	(	)	(	)	(	)	(	)	Changeable
A	<u>Calm</u>	(	)	(	)	(	)	(	)	(	)	(	)	Excitable
P	<u>Careful</u>	(	)	(	)	(	)	(	)	(	)	(	)	Careless
E	<u>Sure</u>	(	)	(	)	(	)	(	)	(	)	(	)	Uncertain

*The letters S, A, P, and E refer to the following dimensions which the so designated pairs of adjectives are designed to measure: stability (S), activity (A), potency (P), and evaluation (E).

The adjectives are underlined to indicate the low end of the scale for scoring purposes.

APPENDIX L

FINAL (70-ITEM) FORM OF YDAS

Please read the following items carefully. Record your immediate reaction by marking an "X" in the parentheses which best describes how fully you agree with the item.

ITEM	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
1. A person should buy a car for its safety more than its looks.	()	()	()	()
2. Not wearing a seatbelt is just plain stupid.	()	()	()	()
3. I don't need anybody to tell me when they think I've had enough to drink.	()	()	()	()
4. I'm still learning to be a good driver.	()	()	()	()
5. If you have just one or two beers while driving, it's O.K.	()	()	()	()
6. I don't like to wear seatbelts.	()	()	()	()
7. It makes me feel good when I am courteous to other drivers.	()	()	()	()
8. You've got to be an idiot to race when driving.	()	()	()	()
9. I don't (or won't) take chances when I'm driving.	()	()	()	()
10. I would get in the car with a driver who has been drinking if I knew and trusted him or her.	()	()	()	()
11. Wearing a seatbelt makes me feel safe.	()	()	()	()

ITEM	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
12. I like myself and my life.	()	()	()	()
13. If I wear a seatbelt, it makes me look like a wimp.	()	()	()	()
14. You should drive carefully because you want to live, not because you are afraid of getting a ticket.	()	()	()	()
15. It's O.K. to drive if you have one or two drinks and you feel in control.	()	()	()	()
16. I feel driving is an art that takes time to master.	()	()	()	()
17. I don't feel comfortable in a car unless I have my seatbelt on.	()	()	()	()
18. If you have good skills, speeding is O.K.	()	()	()	()
19. I love (or think I will love) to show off when I'm driving.	()	()	()	()
20. I would get into my friend's car even though she/he is known to be an unsafe driver.	()	()	()	()
21. I am (or will be) a confident driver to impress myself, not other people.	()	()	()	()
22. I usually (or will usually) drive faster when my friends are in the car.	()	()	()	()
23. Cops watch for speeders so that they can give their quota of tickets and collect fines.	()	()	()	()
24. Hurting someone else with my car would scar me for life.	()	()	()	()

ITEM	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
25. Drunk driving is unlawful and whoever doesn't obey this law should be punished severely.	()	()	()	()
26. I would get into the car with a reckless driver if I had no other way to get home.	()	()	()	()
27. The seatbelt law is too harsh.	()	()	()	()
28. It is fun to drive fast.	()	()	()	()
29. Cruising is fun and exciting.	()	()	()	()
30. I don't think of others because if I did that's when I would get into accidents.	()	()	()	()
31. I drive (or will drive) the way I want to; nobody tells me how.	()	()	()	()
32. I couldn't live with myself if I hurt another human being.	()	()	()	()
33. I would probably ride with a friend who had been drinking if I trusted him or her.	()	()	()	()
34. I think I am (or will be) a good driver, but I need more experience.	()	()	()	()
35. There should be tougher laws to enforce the wearing of seatbelts.	()	()	()	()
36. Just because you don't get caught speeding doesn't make it right.	()	()	()	()
37. You should always obey laws while driving.	()	()	()	()
38. Even though I know it can be dangerous to drink and drive, I would do so anyway in most cases.	()	()	()	()

ITEM	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
39. I would ask my friend to let me out of the car immediately if she/he drove recklessly.	()	()	()	()
40. I may be (or will be) a good driver for my age, but being a good driver really comes with experience.	()	()	()	()
41. Beer doesn't get you drunk; it only makes you sleepy.	()	()	()	()
42. It usually doesn't pay to be concerned about others because most others aren't concerned about me.	()	()	()	()
43. When I drive I would like to be different--not an ordinary cautious driver.	()	()	()	()
44. It's O.K. to speed if you have a radar detector and can get away with it.	()	()	()	()
45. Driving 5 or 10 miles above the speed limit is O.K. because everyone does it.	()	()	()	()
46. Having a couple of drinks or a few "tokes" of marijuana makes me (or would make me) a better driver.	()	()	()	()
47. I would not even consider riding with a drunk person.	()	()	()	()
48. I care about myself and other people so I'm going to be a good driver.	()	()	()	()
49. I know how much seatbelts help in accidents, but I wouldn't wear them if it weren't the law.	()	()	()	()

ITEM	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
50. I think it's O.K. to speed if the traffic conditions allow you to do so.	()	()	()	()
51. I don't usually wear a seatbelt because when I do, I feel strapped in.	()	()	()	()
52. If I cause an accident because of stupidity, I hope I'm the one who gets hurt.	()	()	()	()
53. I am (or will be) a cautious driver.	()	()	()	()
54. Seatbelts are pushed because of all the people who make money from them.	()	()	()	()
55. I like (or will like) to show off my skill by driving fast.	()	()	()	()
56. If I had a lot on my mind, a drink or two would help me get my head together before driving.	()	()	()	()
57. I obey (or would obey) all laws when kids are with me because I want them to grow up to be safe drivers.	()	()	()	()
58. I might get in the car with a driver who has been drinking.	()	()	()	()
59. Safe driving is too "goody-goody" and loses friends.	()	()	()	()
60. I think they exaggerate the risk of getting into an accident due to drinking and driving.	()	()	()	()
61. It is inexcusable to take a human or animal life because of one's carelessness.	()	()	()	()
62. I might get into the car with a driver who is intoxicated.	()	()	()	()

ITEM	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
63. I feel that I am a good person.	()	()	()	()
64. I hope I never get into an accident in which someone is hurt and it is my fault.	()	()	()	()
65. A real friend doesn't let a friend drive drunk.	()	()	()	()
66. If I hurt someone because of my driving, I never want to drive again.	()	()	()	()
67. I would get in the car with an intoxicated person if my friends did.	()	()	()	()
68. I am satisfied with who I am.	()	()	()	()
69. Safe drivers are usually "wimps."	()	()	()	()
70. I would rather walk a hundred miles than get into a car with an unsafe driver.	()	()	()	()

APPENDIX M
TABLE OF SPECIFICATIONS FOR YDAS

Content Areas	Number of Items per Category	Item Numbers
1. Speeding	10	8, <u>18</u> *, <u>22</u> , <u>23</u> , <u>28</u> ,36, <u>44</u> , <u>45</u> , <u>50</u> , <u>55</u>
2. Seatbelts	10	2, <u>6</u> ,11, <u>13</u> ,17, <u>27</u> ,35, <u>49</u> , <u>51</u> , <u>54</u>
3. Safe Driving	10	1,9,14, <u>19</u> , <u>29</u> , <u>31</u> ,37, <u>43</u> , <u>59</u> , <u>69</u>
4. Drinking and Driving/ Beer	10	<u>3</u> , <u>5</u> , <u>15</u> ,25, <u>38</u> , <u>41</u> , <u>46</u> , <u>56</u> , <u>60</u> , <u>65</u>
5. Riding With An Unsafe Driver	10	<u>10</u> , <u>20</u> , <u>26</u> , <u>33</u> ,39,47, <u>58</u> , <u>62</u> , <u>67</u> , <u>70</u>
6. Myself	10	4,12,16,21,34,40,48,53,63, 68
7. Concern for Others	10	7,24, <u>30</u> ,32, <u>42</u> ,52,57,61,64, 66

Total Number of Items = 70

*The item numbers are underlined to indicate items which were deemed negative. Reverse scoring was used depending on whether an item was deemed negative or positive.

APPENDIX N

HAND SCORING INSTRUCTIONS AND NORMS FOR THE YDAS

The Young Driver Attitude Scale (YDAS) is a 70-item instrument that measures attitudes of young drivers (or about-to-be drivers) toward seven different content areas related to driving, namely, Speeding, Seatbelts, Safe Driving, Drinking/Driving/Beer, Riding With An Unsafe Driver, Myself, and Concern for Others. Each of the seven content-area scales consists of 10 items that are scattered more or less randomly throughout the 70 items (see Appendix M). For example, the items measuring attitudes about Speeding are Nos. 8, 18, 22, 23, 28, 36, 44, 45, 50, and 55. Furthermore, some items are stated positively and others negatively (Appendix M) so that scoring of many of the items must be reversed. Again, as an example, Item 8, "You've got to be an idiot to race when driving," is scored as follows:

Strongly Agree (SA) = 1
Agree (A) = 2
Disagree (D) = 3
Strongly Disagree (SD) = 4

In contrast, Item 18, "If you have good skills, speeding is O.K.," is scored in reverse as follows:

Strongly Agree (SA) = 4
Agree (A) = 3
Disagree (D) = 2
Strongly Disagree (SD) = 4

Thus, a high score, say 3 or 4, on either of these items would indicate a tendency to regard speeding as acceptable, or even desirable, whereas a low score would indicate that the student does not consider speeding to be appropriate driving behavior.

Because the 10 items of each scale are scattered throughout the 70 items and also because of reversed scoring of some items, hand scoring is somewhat difficult and time-consuming. The attached "Form for Hand Scoring of YDAS" serves to reduce difficulty and to improve accuracy. The form should be used as follows:

1. Look at the student's response to item No. 1 of the YDAS. Determine whether the student responded Strongly Agree (SA), Agree (A), Disagree (D), or Strongly Disagree (SD).

2. On the scoring form find the row corresponding to Item No. 1. Note that the four possible scores for Item 1 are in the column headed "Safe Driving." This means that Item 1 is one of those in the Safe Driving scale.

3. Circle the number, i.e., 1, 2, 3, or 4, on the scoring form that corresponds to the student's response to Item 1. For example, if the response was "Agree," you would circle the number in the column headed "A"; in this case, the number circled would be 2.

4. Follow the same procedure for items 2, 3, 4, etc., until you have completed all 70 items. If the student has failed to give a response to an item, do not circle anything on the scoring form for that item. Note that for many items the numbers are in reverse order, i.e., 4, 3, 2, 1. In those cases, a response of SA would mean circling the "4" because 4 is in the column headed SA.

5. When you have completed all 70 items, the scores on the seven scales can be obtained by summing the 10 circled numbers for each scale. If fewer than 10 numbers are circled for a given scale, no accurate score can be obtained for that scale. An approximate score can be obtained by using a "2" as the score for the omitted item. However, this is not recommended if the number of omitted items is more than one. In that case, no legitimate score can be obtained for the student on the scale involved.

Interpreting YDAS Scores

After obtaining a student's scores on the seven YDAS scales, one usually wishes to make a judgment about what the scores mean. Do they indicate that the student is likely to be at risk as a new driver? That some form of remedial intervention would be desirable early in the student's driving experience? Such questions are usually answered by comparing the student's scores with those of a large number of other students of a similar age and sex. The values obtained from such large samples are called norms.

Two types of norms are given in the attached tables, each based on a group of 668 males and females ranging in age from approximately 14 to 18 years. Norms are given for the total group as well as for a group of 339 males and a group of 319 females. These latter numbers total only 658 because 10 of the 668 subjects did not specify their sex.

The first type of norms discussed here are called standard-score norms. Tables 54-56 permit one to obtain the standard scores corresponding to each of the raw scores on the 7 YDAS scales. The standard scores have a mean of 100 and a standard deviation of 10 for each of the 7 scales. Raw scores cannot be compared with one another for different scales because the 7 scales have different means and standard deviations. Transforming to standard scores makes it possible to compare a student's performance on one scale with that on any other because all have the same mean and standard deviation. Thus, one can develop a profile for a student such as that in Figure 1. In that figure, the student, a male, had raw scores as follows: Speeding, 29; Seatbelts, 12; Safe Driving, 24; Drinking/Driving/Beer, 20; Riding With An Unsafe Driver, 20; Myself, 19; and Concern for Others, 18. The standard scores also

indicate whether the student is above or below the mean for his or her group and by how much. Note that the larger the score on any of the YDAS scales, the more the student is "at risk" in terms of the attitudes measured by the YDAS. The student in Figure 1 was above the mean, both for his (male) group and for the total group on 4 of the 7 scales. On two of the 7, he was more than one standard deviation above the mean, namely Speeding and Safe Driving. Therefore, he might warrant some attention to reduce his potential risk as a driver.

A second type of norm is based on the percentile rank for each raw score (or the corresponding standard score). A percentile rank is simply the percentage of students in the norming sample that scored below the given raw score. Thus, if a male's raw score of, say, 25 had a percentile rank of 62 when compared with all males in the norming sample, one could conclude that 62 percent of those males had raw scores below 25.

Percentile-rank norms, given for the 7 YDAS scales in Table 57, also permit one to compare a student's scores on the seven YDAS scales and to develop a profile as illustrated in Figure 2, based on the same student of Figure 1. Note that this student was quite high in terms of his percentile rank on both Speeding and Safe Driving, which agrees with observations based on Figure 1. This, as we have said, suggests that he is at risk in terms of his attitudes, as measured by these scales, in comparison with other students of his age and sex. The most valid comparisons of a student's scores should be made vis-a-vis his or her own sexual group.

As a general rule, a student should be considered "at risk" in driving behavior attitudes if the standard score on at least one of the seven YDAS scales is greater than 110 or if the percentile rank on at least one scale is greater than 85%. Such values would suggest a conference with the student to determine whether an attitudinal problem really exists and, if it does, to deal with it.

FORM FOR HAND SCORING OF YDAS

ITEM NUMBER	SPEEDING				SEATBELTS				SAFE DRIVING				DRINK/DRIVE				RIDE UNSAFE				MYSELF				OTHERS			
	SA	A	D	SD	SA	A	D	SD	SA	A	D	SD	SA	A	D	SD	SA	A	D	SD	SA	A	D	SD	SA	A	D	SD
1									1	2	3	4																
2					1	2	3	4																				
3													4	3	2	1												
4																					1	2	3	4				
5													4	3	2	1												
6					4	3	2	1																				
7																												
8	1	2	3	4																					1	2	3	4
9									1	2	3	4																
10																	4	3	2	1								
11					1	2	3	4																				
12																					1	2	3	4				
13					4	3	2	1																				
14									1	2	3	4																
15													4	3	2	1												
16																					1	2	3	4				
17					1	2	3	4																				
18	4	3	2	1																								
19									4	3	2	1																
20																	4	3	2	1								
21																					1	2	3	4				
22	4	3	2	1																								
23	4	3	2	1																								
24																												
25													1	2	3	4												
26																	4	3	2	1								
27					4	3	2	1																				
28	4	3	2	1																								
29									4	3	2	1																
30																												

ITEM NUMBER	SPEEDING				SEATBELTS				SAFE DRIVING				DRINK/DRIVE				RIDE UNSAFE				MYSELF				OTHERS			
	SA	A	D	SD	SA	A	D	SD	SA	A	D	SD	SA	A	D	SD	SA	A	D	SD	SA	A	D	SD	SA	A	D	SD
31									4	3	2	1																
32																									1	2	3	4
33																4	3	2	1									
34																					1	2	3	4				
35					1	2	3	4																				
36	1	2	3	4																								
37									1	2	3	4																
38													4	3	2	1												
39																	1	2	3	4								
40																					1	2	3	4				
41													4	3	2	1												
42																									4	3	2	1
43									4	3	2	1																
44	4	3	2	1																								
45	4	3	2	1																								
46													4	3	2	1												
47																	1	2	3	4								
48																					1	2	3	4				
49					4	3	2	1																				
50	4	3	2	1																								
51					4	3	2	1																				
52																									1	2	3	4
53																					1	2	3	4				
54					4	3	2	1																				
55	4	3	2	1																								
56													4	3	2	1												
57																									1	2	3	4
58																	4	3	2	1								
59									4	3	2	1																
60													4	3	2	1												

ITEM NUMBER	SPEEDING				SEATBELTS				SAFE DRIVING				DRINK/DRIVE				RIDE UNSAFE				MYSELF				OTHERS			
	SA	A	D	SD	SA	A	D	SD	SA	A	D	SD	SA	A	D	SD	SA	A	D	SD	SA	A	D	SD	SA	A	D	SD
61																									1	2	3	4
62																	4	3	2	1								
63																					1	2	3	4				
64																									1	2	3	4
65													1	2	3	4												
66																									1	2	3	4
67																	4	3	2	1								
68																					1	2	3	4				
69									4	3	2	1																
70																	1	2	3	4								
TOTAL																												

127

128

107

Table 54

STANDARD SCORES FOR 7 YDAS CONTENT AREAS--TOTAL

Raw Score	Speeding	Seatbelts	Safe Driv.	Drink Driv.	Unsafe Driv.	Myself	Others
40	137	132	152	152	137	161	151
39	135	131	149	150	135	159	148
38	133	129	146	148	133	156	146
37	131	128	144	146	131	153	144
36	129	126	141	144	130	151	141
35	127	124	139	141	128	148	139
34	125	123	136	139	126	145	137
33	123	121	134	137	124	143	134
32	121	120	131	135	122	140	132
31	119	118	128	133	120	137	130
30	117	117	126	131	119	135	127
29	115	115	123	128	117	132	125
28	113	113	121	126	115	130	122
27	110	112	118	124	113	127	120
26	108	110	116	122	111	124	118
25	106	109	113	120	109	122	115
24	104	107	111	118	108	119	113
23	102	106	108	115	106	116	111
22	100	104	105	113	104	114	108
21	98	102	103	111	102	111	106
20	96	101	100	109	100	108	104
19	94	99	98	107	99	106	101
18	92	98	95	105	97	103	99
17	90	96	93	102	95	101	96
16	88	95	90	100	93	98	94
15	86	93	87	98	91	95	92
14	84	91	85	96	89	93	89
13	82	90	82	94	88	90	87
12	80	88	80	92	86	87	85
11	78	87	77	89	84	85	82
10	76	85	75	87	82	82	80

Table 55

STANDARD SCORES FOR 7 YDAS CONTENT AREAS--MALES

Raw Score	Speeding	Seatbelts	Safe Driv.	Drink Driv.	Unsafe Driv.	Myself	Others
40	133	129	148	147	135	157	148
39	131	128	145	145	134	155	145
38	129	126	142	143	132	152	143
37	127	125	140	141	130	150	140
36	125	123	137	139	128	147	138
35	123	122	135	137	126	145	136
34	121	120	132	135	125	142	133
33	119	119	130	133	123	140	131
32	117	117	127	131	121	137	129
31	115	116	125	129	119	135	126
30	113	114	122	127	117	132	124
29	111	113	120	125	115	130	122
28	109	111	117	123	114	127	119
27	107	110	115	121	112	125	117
26	105	108	112	119	110	122	114
25	103	107	110	117	108	120	112
24	101	105	107	115	106	117	110
23	100	104	105	113	105	115	107
22	98	102	102	111	103	112	105
21	96	101	100	109	101	110	103
20	94	99	97	107	99	107	100
19	92	98	95	105	97	105	98
18	90	96	92	103	96	102	95
17	88	95	90	101	94	100	93
16	86	93	87	99	92	97	91
15	84	92	85	97	90	95	88
14	82	91	82	95	88	92	86
13	80	89	80	93	87	90	84
12	78	88	77	91	85	87	81
11	76	86	75	89	83	85	79
10	74	85	72	87	81	82	76

Table 56

STANDARD SCORES FOR 7 YDAS CONTENT AREAS--FEMALES

Raw Score	Speeding	Seatbelts	Safe Driv.	Drink Driv.	Unsafe Driv.	Myself	Others
40	146	137	164	162	139	166	163
39	144	136	161	160	138	163	160
38	142	134	158	157	136	161	157
37	139	132	155	155	134	158	154
36	137	131	152	152	132	155	152
35	135	129	149	150	130	152	149
34	132	127	146	147	128	149	146
33	130	125	143	145	126	146	144
32	128	124	140	142	124	144	141
31	125	122	137	140	122	141	138
30	123	120	134	137	121	138	135
29	120	118	131	135	119	135	133
28	118	117	128	132	117	132	130
27	116	115	125	130	115	130	127
26	113	113	122	127	113	127	125
25	111	111	119	125	111	124	122
24	109	110	116	122	109	121	119
23	106	108	113	120	107	118	116
22	104	106	110	117	106	116	114
21	102	105	107	115	104	113	111
20	99	103	104	112	102	110	108
19	97	101	101	110	100	107	106
18	95	99	98	107	98	104	103
17	92	98	95	105	96	102	100
16	90	96	92	103	94	99	97
15	87	94	89	100	92	96	95
14	85	92	86	98	90	93	92
13	83	91	83	95	89	90	89
12	80	89	81	93	87	87	87
11	78	87	78	90	85	85	84
10	76	85	75	88	83	82	81

Table 57

PERCENTILE NORMS FOR 7 YDAS SCALES: TOTAL GROUP (N=668), MALES (N=339), AND FEMALES (N=319)

RAW SCORE	SPEEDING			SEATBELTS			SAFE DRIVING			DRINK/DRIVE			UNSAFE DRIV.			MYSELF			OTHERS		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
36				99																	
35				98		99															
34	99			97		98															
33	97		99	96	99	98							99								
32	96		98	95	98	97							98		99						
31	93		96	94	97	96							97		98				99		
30	90	99	95	91	96	94	99						95	99	97				98		99
29	87	98	93	88	95	92	98		99				92	97	95				97		98
28	83	97	90	86	94	90	96		98	99			90	94	91	99			96		98
27	78	95	86	82	91	87	93		96	98		99	86	89	88	97		99	95		97
26	71	91	81	78	89	83	90	99	94	96	99	98	83	87	84	96	99	98	93	99	96
25	62	87	74	75	87	80	86	98	92	95	98	96	80	84	81	96	98	97	89	98	93
24	55	81	67	71	84	77	78	96	87	92	97	95	75	80	77	95	98	97	85	96	90
23	47	75	60	65	79	71	68	93	80	90	96	93	68	75	71	94	97	96	80	94	87
22	40	65	52	59	73	65	58	87	72	86	93	90	61	70	65	92	95	94	70	90	80
21	32	54	42	54	68	60	46	76	61	80	91	85	55	66	60	88	92	90	60	86	72
20	24	44	33	47	62	54	37	63	49	73	88	80	47	59	53	79	84	81	51	80	65
19	19	34	26	42	57	49	28	51	39	68	83	75	40	52	46	69	73	71	42	73	57
18	14	27	20	37	51	43	21	41	31	62	77	69	35	46	40	60	64	62	33	65	48
17	11	22	16	34	44	39	16	32	24	56	70	63	29	41	34	51	56	54	24	55	39
16	8	18	13	30	38	34	11	24	17	48	63	55	23	35	29	40	47	43	17	44	30

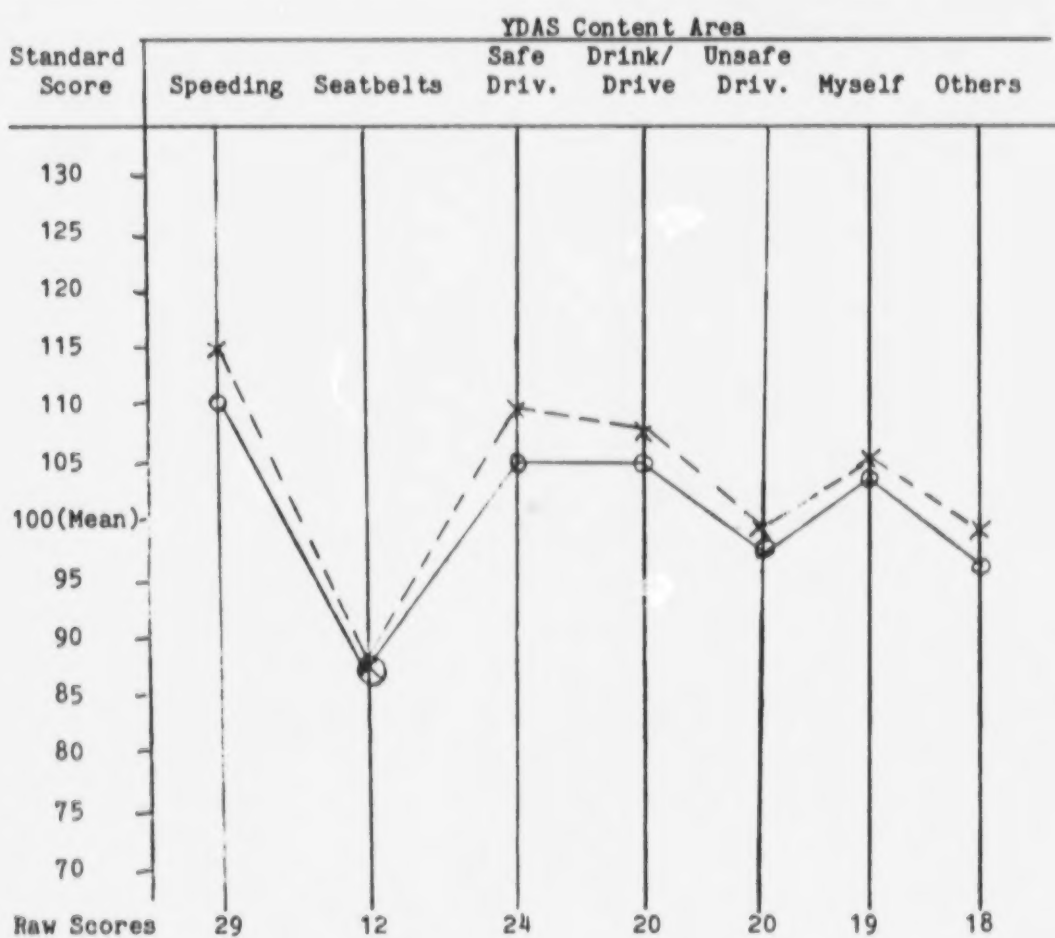
RAW SCORE	SPEEDING			SEATBELTS			SAFE DRIVING			DRINK/DRIVE			UNSAFE DRIV.			MYSELF			OTHERS		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
15	7	13	10	26	32	29	6	16	11	40	55	47	19	29	23	30	36	33	13	32	22
14	5	8	6	22	27	24	4	10	7	31	47	39	14	20	17	21	28	24	8	21	14
13	4	5	4	18	21	19	3	6	4	25	38	31	9	12	10	15	18	16	4	12	8
12	2	3	3	13	15	14	1	3	2	20	28	24	6	7	7	10	11	10	2	6	4
11	1	2	1	8	9	8	0	1	1	14	18	16	4	4	4	6	6	6	1	2	1
10	0	1	1	3	3	3	0	0	0	6	8	7	1	1	1	2	3	2	0	1	1
Mean:	M	23.3		20.4			21.1			16.6			20.4			17.1			19.9		
	F	20.3		18.4			18.6			15.0			19.1			16.5			17.0		
	T	21.9		19.5			19.9			15.9			19.8			16.8			18.5		
SD:	M	5.1		6.7			4.0			5.0			5.5			4.0			4.2		
	F	4.2		5.8			3.4			4.0			5.3			3.6			3.7		
	T	4.9		6.4			3.9			4.6			5.5			3.8			4.2		

135

134

Figure 1

EXAMPLE OF STANDARD SCORE PROFILES OF A MALE SUBJECT;
SUBJECT SELECTED AT RANDOM FROM 339 MALES

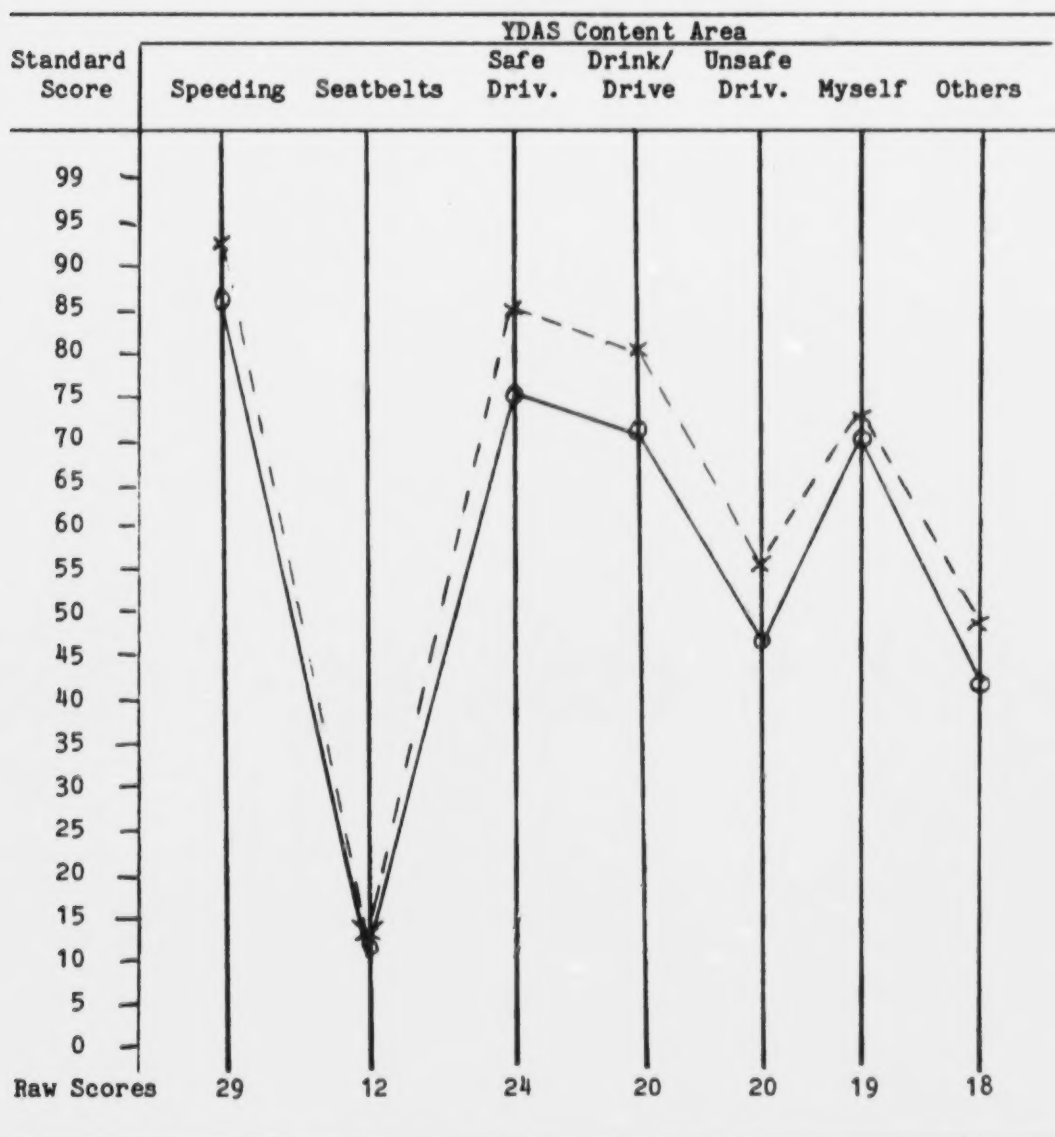


x ----- Profile of Standard Scores Based on Total Group

o ----- Profile of Standard Scores Based on Male Group

Figure 2

EXAMPLE OF PERCENTILE RANK PROFILES OF A MALE STUDENT,
SELECTED AT RANDOM FROM 339 MALES



x ----- Profile of Percentile Ranks Based on Total Group (N=668)

o ----- Profile of Percentile Ranks Based on Male Group (N=339)

APPENDIX O

FOCUS GROUP DISCUSSION QUESTIONS

I'm here because of a research project that is being conducted at Teachers College, Columbia University. The study focuses on the attitudes toward driving of those 15-16 year olds who are about to become drivers. I intend to develop positive learning activities for that age group. Therefore, the information I'm seeking is what kind of learning activities have been the most successful for you in terms of enjoying while learning. Perhaps these activities occurred in school or elsewhere. I consider you the experts on this information, therefore your assistance is greatly needed and would be appreciated.

First, how many of you expect to get a driver's license? How many have one?

Is there an activity you can recall which had a great impact on your learning?

[Give example to stimulate recollection]

What made it so special?

Where did it take place?

Who conducted the activity?

What would be your recommendations for a person developing activities for learning?

[AFTER THE COMPLETION OF THE DISCUSSIONS]

I would like to have you fill out the following questionnaire on driving. It will take approximately ten minutes to complete. This is not a test and will not be graded or returned to you. Therefore, please do not put your name on it. Answer the questions as honestly as you can. When you have finished it, please give it to me.

In closing: Thank you for your time and help. Your answers and opinions were insightful and will be of great assistance in this study.

APPENDIX P
GENERAL INFORMATION SHEET

ACTIVITY _____

PLEASE DO NOT PUT YOUR NAME ON THIS PAPER!

1. How old are you? _____
years/months

2. Do you have your driver's license?

YES NO

If YES, when did you get it? _____

If NO, at what age do you expect to get it? _____

3. Do you feel you are or will be a safe driver?

YES NO

Please explain your choice _____

4. Is it acceptable to drive five miles per hour or more above the speed limit?

YES NO

Please explain your choice _____

5. As a driver, how often do you use or will you use your seatbelt?

All Some None

Please explain your choice _____

6. As a driver, how often do you or will you make your passengers wear a seatbelt?

Always Sometimes Never

Please explain your choice _____

7. When do you think it is appropriate or safe for you to drink and drive?

8. Did you ever drink and drive, or ride with a driver who did?

YES NO

If YES, what did you think about it at the time?

APPENDIX Q

LETTER OF INQUIRY--NYS TROOPERS

May 9, 1988

Sergeant _____
New York State Troopers
Route 23
Claverack, NY 12513

Dear Sergeant:

As per your request, let this letter serve as a formal introduction of myself and the activity I discussed at the barracks on May 5, 1988. I am searching for programs that can be used to change the attitude(s) of the young pre-driver toward risk-taking while behind the wheel. One area to be addressed is drinking and driving.

Many people have a tendency to believe "it happens only to the other guy" and therefore they do little to change their behavior until "it happens to me." Research shows that many adolescents follow this tendency. As part of the drinking-and-driving component of the program, I would like to bring the selected students to a law enforcement agency to witness a simulated DWI arrest (with one or more of the students as the arrestee(s)). As participants in the activity, the students would be required to complete a worksheet (enclosed, with anticipated answers). Also enclosed is a series of questions relating to the car wreck that will be of interest to participants. We hope you can draw them out in a discussion of answers.

At this point, this is a pilot test to see whether we can incorporate such an activity into our final program. I would like to get the participating officer's input, that of the students' and yours if you so choose. Any suggestions about the details of this plan would be appreciated.

Please let me know if the foregoing meets with your approval so that we can arrange a time.

Thank you for your consideration of this project.

Sincerely,

Nancy A. DeKorp
Research Assistant

enc.

"THE ROAD OF NO RETURN:
A MOCK DWI ARREST"

Complete this worksheet after the trip to the law enforcement agency.

1. What is a Breathalyzer test and how does it work?

Answer: A test in which a person suspected of a blood alcohol concentration (BAC) while driving breathes into a machine which measures the BAC. The test usually is administered by a law enforcer.

2. What are the different BACs of significance revealed by the Breathalyzer? Describe how each level of concentration affects the individual.

Answer: affected, impaired, intoxicated

affected - .01% - .04% BAC - judgment and reaction time is lessened

impaired - .05% - .09% BAC - judgment not sound and thinking and reasoning powers are not clear; driving ability is reduced

intoxicated - .10% - judgment severely impaired and driving ability considerably reduced

3. What is the process of arresting a drinking driver?

Answer: (This may vary according to the state--leader should know in advance the process for home state)

4. What are the consequences of being arrested for drinking and driving?

Answer: suspension of license, revocation of license, attending classes, higher insurance rates, probation period after license has been reinstated (NOTE: this also varies state to state)

5. Which contains more alcohol:

- a. 1-1/2 ounces of 80-proof hard liquor (for example, a shot of Southern Comfort Whiskey)
- b. 12 ounces (a can) of beer
- c. 5 ounces (a glass) of wine

Answer: They all contain the same amount of alcohol.

6. Which age group is involved in the most drinking and driving accidents? Circle your answer.

- a. Sixteen to twenty-four year olds
- b. Twenty-five to thirty-four year olds
- c. Above thirty-five year olds

Answer: a

"THE ROAD OF NO RETURN:
THE CAR WRECK"

The answers to these questions will vary; the police or troopers should be asked to serve as resource persons for this information.

1. What was the listed cause of this accident?
2. Any other factors contributing to the accident such as weather, road surface, etc.?
3. Who was responsible for the accident? That person's age? (Adolescent, young adult, adult, older adult).
4. What injuries resulted from the accident?
5. What action was taken against the driver? Against the person responsible for the accident? (i.e., arrest, lawsuit, insurance increases, etc.)

APPENDIX R
EVALUATION BY PARTICIPANTS

ACTIVITY _____

PLEASE DO NOT PUT YOUR NAME ON THIS PAPER!

1. What was the objective of this activity?

2. Was this activity the best way to meet the objective?

YES NO

If NO, what would have made it better?

3. This activity was interesting.

YES NO

Why? _____

4. The activity would have been better if someone else had led it.

YES NO

If YES, the person I would suggest to lead it would be (for example: teacher, parent, etc.) _____

5. The thing I liked the most about this activity was:

6. The thing I liked the least about this activity was:

7. I would recommend this activity to my friends.

YES NO

8. This activity will influence me to be a safer driver.

YES NO

9. The one thing I will remember from this activity is:

10. The strength(s) of this activity was:

11. The weakness(es) of this activity was:

12. Something I learned from this activity that I didn't know before was:

APPENDIX S

DEVELOPMENT OF YOUNG DRIVER INTERVENTION ACTIVITIES

While other age groups have been going through a decline in traffic related deaths, the young driver population of 16-24 has been experiencing an increase. What are the reasons for this and what can we do about it?

In previous studies, we have worked with young people like yourself to find answers to these questions. They have offered their ideas. As a result, this project has developed activities which we think will help the young driver focus on the risks of certain driving behaviors, and will, we hope, influence risk-taking attitudes in a positive direction.

To begin, we would like you to answer some questions about driving. This will allow us to understand your perspective of driving. There are no wrong or right answers. We want to know what you think about driving. Your frankness is important, and we guarantee complete confidentiality. No one will know who you are.

We realize that most of you have yet to get a driver's license, though some of you may already have one, or a permit. Please respond to the questions on the basis of whatever is true for you.

Following your answers to questions, we shall present materials relating to driving. You will have the opportunity to rate these materials. We want to know what you think of them.

Lastly, after all the materials and activities have been presented, you will be asked a second set of questions. Again, we ask for your honest answers because we feel that your contribution to this study will be very valuable. Remember, we guarantee complete confidentiality.

Thank you for your contribution to this important research effort and for the solutions your responses may yield for you, your friends, and for the new drivers of the future.

At this time, please place the last three digits of your telephone number in the upper right corner of the back of the last sheet--by the staple. After you have completed that, you may begin.

APPENDIX T
FUTURE DRIVING BEHAVIOR

Please complete each of the following items (1-8) by marking an "X" in the appropriate parentheses (items 1-6), or circling the chosen response (items 7-8).

1. I am looking forward to taking risks.
 Definitely yes () Maybe () Definitely no ()
2. I am anxious to race other drivers.
 Definitely yes () Maybe () Definitely no ()
3. Once I have (or now that I have) my license I can stop wearing my seatbelt.
 Definitely yes () Maybe () Definitely no ()
4. I will experiment a bit to find out how well I drive after drinking.
 Definitely yes () Maybe () Definitely no ()
5. I will drive 10 miles or more over the speed limit to get away from all the slow drivers.
 Definitely yes () Maybe () Definitely no ()
6. I think it is O.K. to drive after drinking a couple of beers.
 Definitely yes () Maybe () Definitely no ()

* * * * *

7. Which of the following best describes how you rate yourself as a driver, now or after you are licensed?
 (Circle one) a) Extremely Safe d) Unsafe
 b) Very Safe e) Very Unsafe
 c) Safe f) Extremely Unsafe
8. Which of the following best describes your outlook about the future?
 (Circle one) a) Extremely Optimistic d) Pessimistic
 b) Very Optimistic e) Very Pessimistic
 c) Optimistic f) Extremely Pessimistic

APPENDIX U

PERSONAL INFORMATION

Please complete each of the following items (A-E) by filling in the blank or marking an "X" in the appropriate space.

- A. Age:
 years months
- B. Sex: Male ()
 Female ()
- C. Do you drive? (If yes, proceed to item D; if no, skip to E)
- Yes ()
 No ()
- D. If yes, how often?
- Once a month or less ()
 Once a week ()
 Two or three times a week ()
 Four or five times a week ()
 Daily ()
- E. If not already licensed, how soon do you expect to be a licensed driver?
- As soon as I am eligible ()
 Within a couple of months after eligibility ()
 About a year after eligibility ()
 No plans at this time ()

APPENDIX V

RISK-TAKING ATTITUDES OF STUDENTS NEARING LICENSURE
GUIDELINES FOR USE OF THE MODULE* IN SCHOOL SETTINGS

FOR WHOM IS THIS INTENDED?

This module was developed for pre-drivers 15-16 years old who are about to get or who recently got their driver's license. It is an effort to assess their risk-taking attitudes and to apply an intervention activity to improve those in need of change, before they are acted out on the highway.

HOW ARE RISK ATTITUDES DETERMINED?

By administering the "Young Driver Attitude Scale," a 70-item survey that requires approximately 15 minutes to complete.

WHY WAS THIS MODULE DEVELOPED?

The young driver population is overrepresented in national highway accident and injury statistics. As you may well be aware, injuries cause about 80 percent of all deaths among young adults and adolescents, and most of these injuries are caused by motor vehicle accidents. In fact, about one-half of all deaths of 16-19 year olds are the result of motor vehicle crashes.

This module, therefore, has been developed for use by organizations involved with 15-16 year olds in the hope that its application will improve highway safety for all.

WHERE AND WHEN TO USE THE MODULE

The film and the activities may be used in the following ways:

1. As a supplemental lesson in driver education in a school setting while examining driver attitudes and their relationship to accidents and violations.
2. As an activity in a civics or ethics course.
3. In a special session before major events such as proms or graduations.
4. As a follow-up of discussions to a local accident involving one of the risk behaviors--drinking and driving, speeding or lack of seatbelt use.

*Module is synonymous with intervention as previously used in this report.

5. As a learning activity for the members of such organizations as Students Against Drunk Driving (SADD) or sponsored by the SADD chapter for other students in the school.
6. In a health education curriculum when discussing traffic safety, alcohol use, or laws concerning the health of individuals and society.
7. In community organizations with young about-to-be driver members such as Boy Scouts, Girl Scouts, 4-H, etc.

OBJECTIVES OF THE MODULE

The module was developed so that the participant will be able to:

1. Witness a tragic situation from the varying perspectives of the characters in the film.
2. Discuss various risk behaviors exemplified.
3. Explore possible consequences of those behaviors.
4. Decide on alternative behaviors that best suit the individual.

INTRODUCTION

Allotted time: One minute

An introduction somewhat like the following:

Hello, my name is Nancy DeKorp. I am a research assistant from Teachers College, Columbia University in New York City. I appreciate your taking time from your normal classwork to participate in this study about young drivers. We will begin now.

ACTIVITY ONE

"The Young Driver Attitude Survey (YDAS)"

Allotted time: 20 minutes

WHAT IS THE YDAS?

The survey was developed for young about-to-be drivers or young drivers who have been licensed for a short time. By answering this questionnaire frankly, the students will identify those attitudes--if any--that show potentially high risk-taking driver behavior. Answers may also identify those students who will need extra attention from the teacher to overcome negative attitudes.

HOW TO ADMINISTER THE SURVEY

NOTE: The survey should be completed before (from a day before to, say, minutes before) the module is to be used.

1. Each student should receive a survey, and keep it face down until all students are ready for the instructions. Be prepared to provide pencils as needed.
2. The following instructions (which are also found attached to each survey) should be read aloud to the students.

DEVELOPMENT OF YOUNG DRIVER INTERVENTION ACTIVITIES

While other age categories have been going through a decline in traffic related deaths, the young driver population of 16-24 has been experiencing an increase. What are the reasons for this and what can we do about it?

In previous studies, we have worked with young people like yourself to find answers to these questions. They have offered their ideas. As a result, this project has developed activities which we think will help the young driver focus on the risks of certain driving behaviors, and influence risk-taking attitudes in a positive direction.

To begin, we would like you to answer some questions about driving. This will allow us to understand your perspective of driving. There are no wrong or right answers. We want to know how you feel about driving. Your frankness is important, and we guarantee complete confidentiality. No one will know who you are.

We realize that most of you have yet to get a driver's license, though some of you may already have one, or a permit. Please respond to the questions on the basis of whatever is true for you.

Following your answers to questions, we shall present materials relating to driving. You will have the opportunity to rate these materials. We want to know what you think about them.

Finally, after all the materials and activities have been presented, you will be asked a second set of questions. Again, we ask for your honest answers because we feel that your contribution to this study will be very valuable. Remember, we guarantee complete confidentiality.

Thank you for your contribution to this important research effort and for the solutions your responses may yield for you, your friends, and others who follow you.

At this time, please place the last three digits of your telephone number in the upper right corner of the back of the last sheet--by the staple. After you have completed that, you may begin.

3. When the survey is completed and you are collecting it, be sure to see that the last three digits of the phone numbers have been placed on the back of the last page.
4. In those circumstances in which the survey will be administered once again at the completion of the module, both before and after copies can be collated by the three digits and compared.

ACTIVITY TWO
 "Just Another Friday Night"
 Allotted time: 25 minutes

The film is open-ended, and designed to "trigger" a variety of responses--some of which are emotional/attitudinal in nature and others intellectual. In this module the film is used in connection with small group discussion. View this film or review the script before beginning the module.

"PROCESSING OUT" "JUST ANOTHER FRIDAY NIGHT" THROUGH QUESTIONS

The film is used to elicit responses from students in the cognitive, attitudinal, and behavioral intention areas. It is up to the group leader to "process out" those thoughts and feelings so that participants may make more intelligent decisions for themselves by understanding the situation more clearly.

Some questions will lead toward cognitive growth and retention but more emphasis has been placed on attitudes, feelings, and possible behaviors since these areas are more difficult to influence.

Therefore, the purpose of the film, accompanying guide and activities is to enable the students to become emotionally involved in a vicarious experience and through the use of process questions allow these reactions to be translated into learning experiences that will influence their risk-taking attitudes.

Suggested Procedures for the Leader

1. Preview the film a few times in order (a) to become familiar with the characters, their situations and reactions, and (b) to decide how you will use what you see.
2. Think of how you can ask questions of participants in a way to make previous learning relevant to the actual life experiences of the

participants. When discussing their responses, listen carefully as it will tell you what questions should follow. This "piggy backing" of questions results in a more realistic flow of thought. It is worth repeating that much of the following discussion involves feeling and should not be judged right or wrong.

GETTING STARTED

1. Introduce the movie. Explain that Johnny Miller thought it would be "Just Another Friday Night" but it did not end that way. Suggest they pay close attention to Johnny's attitude toward driving, and let them know you will ask questions at the end.
2. Show the movie.
3. When it has ended, ask the participants the following:
 - What sentence would you give if you were the judge?
What sentence would you want if Johnny Miller killed someone you loved?
 - What was Johnny's attitude toward driving?
How was that demonstrated?
(Suggested response: Unsafe as was shown by: his speeding in the residential section and on the highway where the accident occurred; drinking and smoking marijuana and then driving; not fastening his seatbelt or not having the front passengers use one. If other suggestions are made, ask the students to elaborate on them.)
 - Is his attitude realistic--do other young drivers have similar attitudes?
(Suggestion: ask for a show of hands of those who know someone with an attitude toward driving similar to Johnny's)
 - What are the contributing reasons for the deaths of Johnny Miller's friends?
(Possible reasons: Johnny's attitude toward driving which included too much alcohol; unbuckled seatbelts; and speeding. Driver inexperience and his succumbing to peer pressure may have contributed.)
 - How would you rate Johnny Miller as a driver? Why?
 - Thinking back to the causes of the deaths, what do you believe could have been done to prevent them?
(Responses should include: no drinking and driving; use seatbelts--therefore, the passengers in the back of the truck should not have been there; follow the speed limit; use good judgment instead of responding to peer pressure; be aware of weather conditions and its effects on road surfaces [water puddle on the highway]).

ACTIVITY THREE
 "For Your Information"
 Allotted time: 20 minutes

Participant should each receive a packet of information sheets. These will reinforce the information and help them in decision-making. Where necessary, as indicated by an asterisk (*), the participants should refer to the appropriate information sheet.

- a. What is a safe rate of drinking?
 (Answer: no more than one alcoholic beverage per hour--as we shall see in more detail in a few moments. Or is any rate of drinking safe?)

- b. Which has more alcohol--a glass of wine, a can of beer, or a shot of whiskey?
 (Answer: they all contain equal amounts of alcohol)

***INFORMATION SHEET ONE**

Discuss how the beverage volume multiplied by the alcohol percentage yields the amount of alcohol.

Beer = 12 ounces x .05 alcohol = .60

Wine = 5 ounces x .12 alcohol = .60

Shot of 80-proof whiskey = 1.5 ounces x .40 alcohol = .60

- c. What happens when one has had too much to drink?
How would it affect their driving?
 (Answer: Alcohol is a depressant. It slows down body functions as well as reflexes and impairs judgment. Also, people begin to lose their inhibitions. This can worsen driving skills--driving into the other lanes, losing perception and reaction time, falling asleep at the wheel, succumbing to peer pressure or taking unnecessary risks.)

***INFORMATION SHEET TWO**

- 1) Explain how to use the BAC chart: find your weight and the number of drinks consumed in a designated time (up to four hours), then determine the BAC level.

- 2) Review the effects of different levels of BAC and on behavior.

- d. What are the possible consequences for DWI?
 (Answer: loss or suspension of driver's license; loss of car insurance coverage; car accident; death to self or others; payment of heavy fine and/or jail term especially when death is involved)

***INFORMATION SHEET THREE**

Both tables on this sheet discuss the law and BAC levels. They should be reviewed for full understanding. This information should then be related to the consequences of drinking and driving as found in the answers in the guide.

e. What can be done to avoid drinking and driving?

(Answer: don't drink if you plan on driving; have a designated driver; plan to stay over instead of driving home; keep drinks to one per hour; be assertive with your friends--don't let them tell you what to do or what is cool)

***INFORMATION SHEET FOUR**

This question is important for the participants in their making alternative choices to drinking and driving. The chart on this sheet can be used to determine drinking limits. Review its use and relate it to possible alternatives. (see guide)

Tell the participants:

It is well known that drivers tend to speed more when they have been drinking. This also increases their risks for more accidents and fatalities.

f. What are other reasons for people to speed?

(Possible answers: in a rush, peer pressure, looking cool, to see what the car can do, because they like the feeling)

g. What countermeasures can be taken to prevent speeding or the desire to speed?

(Possible answers: leave earlier; be assertive to peers--it's your license; find other ways to get a "speed rush" through activities such as sports; join clubs or do things for others that make you feel good)

Tell the participants:

It is also well known that drinking drivers use their seatbelts less often than non-drinkers. Because they are at higher risk for an accident, they have a greater need for their seatbelts.

h. What can be done to reduce injury in a crash, regardless of how it is caused?

(Answer: a seatbelt will keep a person in place and help to avoid or reduce the second collision, which occurs when the body of the person collides with the interior of the car)

***INFORMATION SHEET FIVE**

With the help of the sheet as illustration, discuss Collision One and Collision Two.

i. For what other reasons do people you know not wear a seatbelt?

(Possible answers: discomfort, wrinkled clothes, fear of being trapped in an accident, looking like a "wimp," wanting to be "cool.")

j. Why should people wear seatbelts?

(Possible answers: it's the law, saves lives, prevents possible disfigurement if there is an accident--"wrinkled clothes are better than a permanently wrinkled face"; helps one to remain conscious during an accident so as not to be trapped)

***INFORMATION SHEET SIX**

Use the written text and illustration on this page to answer the question.

ACTIVITY FOUR**"The Young Driver Attitude Survey"**

Allotted time: 15 minutes

Distribute second copies of the "Young Driver Attitude Survey." See the guidelines in ACTIVITY ONE for instructions. Tell the students this survey form is similar to the one they took earlier. Tell them once again that they are to place the last three digits on the back of the last page, that their frankness is essential, and that the results will be confidential. Collect the forms when completed.

ACTIVITY FIVE**"Evaluations"**

Allotted time: 8 minutes

The students should complete the "Student Evaluation Form." The teacher should complete the "Traffic Safety Communication Rating Scale" for the film "Just Another Friday Night" and the "Teacher Evaluation Form" for the Module.

APPENDIX W

RISK-TAKING ATTITUDES OF ABOUT-TO-BE DRIVERS
GUIDELINES FOR THE USE OF THE MODULE IN COMMUNITY SETTINGS

FOR WHOM IS THIS INTENDED?

This module was developed for pre-drivers 15-16 years old who are about to get or who recently got their driver's license. It is an effort to assess their risk-taking attitudes and to apply an intervention activity to improve those in need of change, before they are acted out on the highway.

HOW ARE RISK ATTITUDES DETERMINED?

By administering the "Young Driver Attitude Scale," a 70-item survey that requires approximately 15 minutes to complete.

WHY WAS THIS MODULE DEVELOPED?

The young driver population is overrepresented in national highway accident and injury statistics. As you may well be aware, injuries cause about 80 percent of all deaths among young adults and adolescents, and most of these injuries are caused by motor vehicle accidents. In fact, about one-half of all deaths of 16-19 year olds are the result of motor vehicle crashes.

This module, therefore, has been developed for use by organizations involved with 15-16 year olds in the hope that its application will improve highway safety for all.

WHERE AND WHEN TO USE THE MODULE

The film and the activities may be used in the following ways:

1. As a supplemental lesson in driver education in a school setting while examining driver attitudes and their relationship to accidents and violations.
2. As an activity in a civics or ethics course.
3. In a special session before major events such as proms or graduations.

4. As a follow-up of discussions to a local accident involving one of the risk behaviors--drinking and driving, speeding or lack of seatbelt use.
5. As a learning activity for the members of such organizations as Students Against Drunk Driving (SADD) or sponsored by the SADD chapter for other students in the school.
6. In a health education curriculum when discussing traffic safety, alcohol use, or laws concerning the health of individuals and society.
7. In community organizations with young about-to-be driver members such as Boy Scouts, Girl Scouts, 4-H, etc.

OBJECTIVES OF THE MODULE

The module was developed so that the participant will be able to:

1. Witness a tragic situation from the varying perspectives of the characters in the film.
2. Discuss various risk behaviors exemplified.
3. Explore possible consequences of those behaviors.
4. Decide on alternative behaviors that best suit the individual.

INTRODUCTION

Allotted time: One minute

An introduction somewhat like the following:

Hello, my name is Nancy DeKorp. I am a research assistant from Teachers College, Columbia University in New York City. I appreciate your taking time from your normal activities to participate in this study about young drivers.

ACTIVITY ONE

"The Young Driver Attitude Survey (YDAS)"

Allotted time: 20 minutes

WHAT IS THE YDAS?

The survey was developed for young about-to-be drivers or young drivers who have been licensed for a short time. By answering this questionnaire frankly, the participants will identify those attitudes--if any--that show potentially high risk-taking driver behavior. Answers

may also identify participants who will need extra attention from the leader to overcome negative attitudes.

HOW TO ADMINISTER THE SURVEY

NOTE: The survey should be completed before (from a day before to, say, minutes before) the module is to be used.

1. Each participant should receive a survey, and keep it face down until everybody has one and is ready for instructions. Be prepared to provide pencils as needed.
2. The following instructions (which are also found attached to each survey) should be read aloud to the participants.

DEVELOPMENT OF YOUNG DRIVER INTERVENTION ACTIVITIES

While other age categories have been going through a decline in traffic related deaths, the young driver population of 16-24 has been experiencing an increase. What are the reasons for this and what can we do about it?

In previous studies, we have worked with young people like yourself to find answers to these questions. They have offered their ideas. As a result, this project has developed activities which we think will help the young driver focus on the risks of certain driving behaviors, and influence risk-taking attitudes in a positive direction.

To begin, we would like you to answer some questions about driving. This will allow us to understand your perspective of driving. There are no wrong or right answers. We want to know how you feel about driving. Your frankness is important, and we guarantee complete confidentiality. No one will know who you are.

We realize that most of you have yet to get a driver's license, though some of you may already have one, or a permit. Please respond to the questions on the basis of whatever is true for you.

Following your answers to questions, we shall present materials relating to driving. You will have the opportunity to rate these materials. We want to know what you think about them.

Finally, after all the materials and activities have been presented, you will be asked a second set of questions. Again, we ask for your honest answers because we feel that your contribution to this study will be very valuable. Remember, we guarantee complete confidentiality.

Thank you for your contribution to this important research effort and for the solutions your responses may yield for you, your friends, and others who will follow you.

At this time, please place the last three digits of your telephone number in the upper right corner of the back of the last sheet--by the staple. After you have completed that, you may begin.

3. When the survey is completed and you are collecting it, be sure to check to see that the last three digits of the phone numbers have been placed on the back of the last page.
4. In those circumstances in which the survey will be administered once again at the completion of the module, both before and after copies can be collated by the three digits.

ACTIVITY TWO

"Just Another Friday Night"

Total Allotted time: 35 minutes
(Movie - 15 minutes and
Discussion - 10 minutes)

The movie "Just Another Friday Night" is the "lead in" for ACTIVITY THREE which will be conducted by the law enforcer. This film should be reviewed or the script read prior to participant viewing.

The discussion session should be brief and to the point using the questions from the guide. Possible answers where necessary have been included. Other questions require responses involving opinions or feelings, therefore no answers have been included.

The film is open-ended, and designed to "trigger" a variety of responses--some of which are emotional/attitudinal in nature and others of which may be intellectual. Therefore, the purpose of the film, accompanying guide, and activities is to enable the participants to become emotionally involved in a vicarious experience, and, through the use of process questions allow these reactions to be translated into learning experiences that will influence their risk-taking attitudes.

Suggested Procedures for the Leader

(The activity leader could be the group leader or preferably the law enforcer.)

1. Preview the film a few times in order (a) to become familiar with the characters, their situations and reactions, and (b) to decide how you will use what you see.
2. Think of how you can ask questions of participants in a way to make previous learning relevant to the actual life experiences of the

participants. When discussing their responses, listen carefully as it will tell you what questions should follow. This "piggy backing" of questions results in a more realistic flow of thought. It is worth repeating that much of the following discussion involves feeling and should not be judged right or wrong.

GETTING STARTED

1. Introduce the film or videocassette. Explain that though Johnny Miller thought it would be "Just Another Friday Night," it did not end that way. Suggest they pay close attention to Johnny's attitude toward driving, and let them know you will ask questions at the end.

2. Show the movie.

3. When it has ended, ask the participants the following:

- What sentence would you give if you were the judge?
What sentence would you want if Johnny Miller killed someone you loved?
- What was Johnny's attitude toward driving?
How was that demonstrated?
(Suggested response: Unsafe as was shown by: his speeding in the residential sections and on the highway where the accident occurred; drinking and smoking marijuana and then driving; not fastening his seatbelt or not having the front passengers use one. If other suggestions are made, ask the students to elaborate on them.)
- Is his attitude realistic--do other young drivers have similar attitudes?
(Suggestion: ask for a show of hands of those who know someone with an attitude toward driving similar to Johnny's)
- What are the contributing reasons for the deaths of Johnny Miller's friends?
(Possible reasons: Johnny's attitude toward driving which included too much alcohol; unbuckled seatbelts; and speeding. Driver inexperience and his succumbing to peer pressure may have contributed.)
- How would you rate Johnny Miller as a driver? Why?
- Thinking back to the causes of the deaths, what do you believe could have been done to prevent them?
(Responses should include: no drinking and driving; use seatbelts--therefore, the passengers in the back of the truck should not have been there; follow the speed limit; use good judgment instead of responding to peer pressure; be aware of weather conditions and its effects on road surfaces [water puddle on the highway]).

ACTIVITY THREE
 "Mock DWI Arrest"
 Allotted time: 52 minutes

The activity leader should be a law enforcer (e.g., police officer, sheriff, state trooper) who can identify with young people.

WHAT TO DO

1. Re-emphasize that Johnny Miller took chances or risks perhaps due to his age and the influence of alcohol. (If a local DWI accident occurred, the law enforcer should relate the real incident to the Johnny Miller incident.)

2. The "Mock DWI Arrest" is conducted by the law enforcement agent. Because each state has its own laws and procedures for DWI arrests, a detailed description cannot be included here. However, the areas to be covered should include:

- what causes a law enforcement agent to suspect a vehicle is being driven by drunk driver.
- the routine involved in stopping the vehicle and deciding whether the driver has been drinking.
- the procedure for transporting the suspected driver to the law enforcement agency (or where the Breathalyzer is used).
- a simple description of the Breathalyzer and its function, followed by a demonstration using a volunteer (having gargled with mouthwash or consumed an alcoholic beverage so as to obtain a reading).
- a brief description of arraignment and how the arrest affects future driving privileges.

3. "For Your Information"

During the "Arrest" or immediately following it, key information should be discussed. Each participant should receive a packet of information sheets to reinforce the information and to help participants in decision-making. As each question is asked, where indicated by an asterisk (*), the participants should refer to the appropriate information sheet.

- a. What is a safe rate of drinking?
 (Answer: no more than one alcoholic beverage per hour--as we shall see in more detail in a few moments. Or is any rate of drinking safe?)
- b. Which has more alcohol--a glass of wine, a can of beer, or a shot of whiskey?
 (Answer: they all contain equal amounts of alcohol)

*INFORMATION SHEET ONE

Discuss how the beverage volume multiplied by the alcohol percentage yields the amount of alcohol.

Beer = 12 ounces x .05 alcohol = .60

Wine = 5 ounces x .12 alcohol = .60

Shot of 80-proof whiskey = 1.5 ounces x .40 alcohol = .60

c. What happens when one has had too much to drink?

How would it affect their driving?

(Answer: Alcohol is a depressant. It slows down body functions as well as reflexes and impairs judgment. Also, people begin to lose their inhibitions. This could worsen driving skills--driving into the other lanes, losing perception and reaction time, falling asleep at the wheel, succumbing to peer pressure or taking unnecessary risks.)

*INFORMATION SHEET TWO

1) Explain how to use the BAC chart: find your weight and the number of drinks consumed in a designated time (up to four hours), then determine the BAC level.

2) Review the effects of different levels of BAC on behavior.

d. What are the possible consequences for DWI?

(Answer: loss or suspension of driver's license; loss of car insurance coverage; car accident; death to self or others; payment of heavy fine and/or jail term, especially when death is involved)

*INFORMATION SHEET THREE

Both tables on this sheet discuss the law and BAC levels. They should be reviewed for full understanding. This information should then be related to the consequences of drinking and driving as found in the answers in the guide.

e. What can be done to avoid drinking and driving?

(Answer: don't drink if you plan on driving; have a designated driver; plan to stay over instead of driving home; keep drinks to one per hour; be assertive with your friends--don't let them tell you what to do or what is cool)

*INFORMATION SHEET FOUR

This question is important for the participants in their making alternative choices to drinking and driving. The chart on this sheet can be used to determine drinking limits. Review its use and relate it to other possible alternatives. (see guide)

Tell the participants:

It is well known that drivers tend to speed more when they have been drinking. This also increases their risk for more accidents and fatalities.

- f. What are other reasons for people to speed?
(Possible answers: in a rush, peer pressure, looking cool, to see what the car can do, because they like the feeling)
- g. What countermeasures can be taken to prevent speeding or the desire to speed?
(Possible answers: leave earlier; be assertive to peers--it's your license; find other ways to get a "speed rush" through activities such as sports; join clubs or do things for others that make you feel good)

Tell the participants:

It is also well known that drinking drivers use their seatbelts less often than non-drinkers. Because they are at higher risk for an accident, they have a greater need for their seatbelts.

- h. What can be done to reduce injury in a crash, regardless of how it is caused?
(Answer: a seatbelt will keep a person in place and help to avoid or reduce the second collision, which occurs when the body of the person collides with the interior of the car)

***INFORMATION SHEET FIVE**

With the help of the sheet as illustration, discuss Collision One and Collision Two.

- i. For what other reasons do people you know not wear a seatbelt?
(Possible answers: discomfort, wrinkled clothes, fear of being trapped in an accident, looking like a "wimp," wanting to be "cool.")
- j. Why should people wear seatbelts?
(Possible answers: it's the law, saves lives, prevents possible disfigurement if there is an accident--"wrinkled clothes are better than a permanently wrinkled face"; helps one to remain conscious during an accident so as not to be trapped)

***INFORMATION SHEET SIX**

Use the written text and illustration on this page to answer the question.

SUMMARY

Summarize the movie, mock arrest, and discussion by asking what can be done to avoid the tragedy from occurring (Possible answers: do not drink and drive; do not let others tell you what to do, which is peer pressure; use good judgment; do not speed; and fasten seatbelts).

ACTIVITY FOUR
"The Young Driver Attitude Scale"
Allotted time: 15 minutes

(This will be conducted by SREP personnel.)

Distribute second copies of the "Young Driver Attitude Scale." See the guidelines in ACTIVITY ONE for instructions. Tell the participants this survey form is SIMILAR to the one they took earlier. Tell them once again that they are to place the last three digits on the back of the last page, that their frankness is essential, and that the results will be confidential. Collect the forms when completed.

ACTIVITY FIVE
"Evaluations"
Allotted time: 8 minutes

The participants should complete the "Participant Evaluation Form." The leader should complete the "Traffic Safety Communication Rating Scale" for the film and the "Activity Leader Evaluation Form." If more than one person led the activity (the law enforcer and the group leader/chaperone), then both should complete the evaluation. The completed forms should be placed in the envelope marked for the site.

APPENDIX X
TEACHER EVALUATION FORM*

We deeply appreciate your involvement in this effort to develop a valuable educational approach to influencing positively some of the driver attitudes of the new young drivers of our nation, and in the final version of the program we will acknowledge your contribution with sincere thanks. Please print below the exact way in which you would like us to note your cooperation.

NAME _____ GRADE _____

SCHOOL _____

CITY _____ STATE _____

1. As you read Guidelines for the Use of the Module, please write your comments, additions, and other suggestions for change directly on the margins or between the lines of the pages to which they apply. In addition, please answer the questions on the following pages about the guidelines.
2. Please answer questions 24-26 as well.

*This is the face sheet of the form that was distributed and discussed with each teacher prior to the start of the module. The 26 questions comprising the Teacher Evaluation Form and a summary of the responses are found in the following pages of this Appendix.

Teacher Evaluation Summary (N=10)

*Omitted represents the number of teachers who did not give any answer to the question.

**Other represents an answer that did not fit within the established categories; these responses usually took the form of a comment.

1. Does "FOR WHOM IS THIS INTENDED?" give you sufficient information about the purpose of the module? If it does not, state what should be added.

Yes	=	9
No	=	0
Omitted*	=	1

2. Is "HOW ARE RISK ATTITUDES DETERMINED?" clear? If not, how can it be improved?

Clear	=	8
Not Clear	=	0
Omitted	=	1
Other**	=	1

3. Does "WHY WAS THIS MODULE DEVELOPED?" and why it is being directed toward teenagers come across clearly enough? If not, how can it be improved?

Clear	=	7
Not Clear	=	0
Omitted	=	1
Other	=	2

Comments

- You might add that recently teenage drunk driving accidents have been on a slight decline. One compliment might help.
- Maybe include what percentage die due to alcohol related accidents--among that age group.

4. Does "WHERE AND WHEN TO USE THE MODULE" clearly define situations in which it can be used? Are there others which were not listed?

Clear	=	8
Not Clear	=	0
Omitted	=	1
Other	=	1

Comments

- As part of a program for young offenders
- In juvenile hall or CYA setting
- Any weekend

5. Do you find any of the "OBJECTIVES" impractical or unrealistic?
If so, which?

Yes = 0
No = 9
Omitted = 1

Comments

- Objective #1 may be a bit unrealistic for 15-16 year olds
- Not at all
- Students are responsive to these objectives

6. Which of the objectives do you feel is (are) the most important?
(Listed in descending order of frequency)

<u>Objective</u>	<u>Frequency</u>
3	6
2	4
2	3
all	2
1	2

Comments

- They all are important but deciding on alternatives is a step I believe most people (teens) don't consider.

7. Are objectives missing? If so, please state which.

Yes = 0
No = 5
Omitted = 3
Other = 2

Comments

- Discuss why young drivers exhibit the risk behaviors in #2

ACTIVITY ONE "The Young Driver Attitude Scale (YDAS)"

8. Does "WHAT IS THE YDAS" clearly explain the form? If not, how can it be improved?

Clear = 6
Not Clear = 0
Omitted = 1
Other = 3

Comments

- 70 items should give enough information for a good assessment of student behavior
- Last sentence is not clear
- Teachers can also identify those attitudes which are high risk

9. Is "HOW TO ADMINISTER THE SCALE" adequately described? If not, how can it be improved?

Yes = 8
 No = 0
 Omitted = 1
 Other = 1

Comment

-Use quotation marks or highlight material that is read to the students

ACTIVITY TWO "Just Another Friday Night"

10. Is the explanation for "PROCESSING OUT" "JUST ANOTHER FRIDAY NIGHT" THROUGH QUESTIONS thorough and clear? If not, how can it be improved?

Yes = 7
 No = 0
 Omitted = 1
 Other = 1

Comment

-Define "Processing Out"; Provide some "sample questions"

11. Is "Suggested Procedures for the Teacher" helpful in preparing for the module? How can it be improved?

Yes = 9
 No = 0
 Omitted = 1

12. Is "GETTING STARTED" thorough enough? How could it be improved?

Yes = 8
 No = 0
 Omitted = 1
 Other = 1

Comments

-Select the recorder [small-group secretary] before showing the film so they can begin discussion as soon as the film is over.
 -Make it more relevant to them--when was the last time you saw someone act this way, your brother, sister, parents?

13. Were the activities in logical sequence and easily conducted? How can they be improved?

Yes = 8
 No = 0
 Omitted = 2

Comment

- Sometimes brainstorming is not effect[ive], others means should be explored.

14. What was the most important thing you think students will learn from the film?

Omitted = 1

Comments

- There are consequences.
- Accidents can happen to you.
- The difficulty of life after the accident. The tough decision on what to do with someone who committed an accident.
- Attitudes do vary but attitudes can be changed in order to make responsible choices.
- I don't believe most of us consider consequences of certain acts, this film suggests consequences and helps students clarify their own values and feelings.
- The effect of drugs on the driver.
- That attitudes are as important as handling skills in the driving task. That peer pressure can have a negative influence on driving.
- Separate drinking and driving.
- To be responsible for their actions and think twice before doing something stupid (follower vs. leader concept).

15. Was there anything omitted in the film which you think should have been included?

Yes = 0
 No = 4
 Omitted = 1
 Other = 5

Comments

- What was the sentence.
- Showing the families that lost loved ones--the devastating effects. Maybe even include some that survived, but were maimed for life and how they felt. Also allowing the viewer to become more attached or close to the persons eventually killed.
- What did the judge decide--how is Johnny Miller doing now!! How do we rehabilitate a person who has committed manslaughter?
- Liability for those killed--no insurance--no mention of responsibility--more (innercity) setting, mixture of races.

16. Was there anything included in the film which you believe should have been omitted?

Yes = 0
 No = 8
 Omitted = 1
 Other = 1

Comment

-Pre-accident was not too realistic. Wheel shaking and such.

17. Do you think there should be additions or deletions in the Process Questions and Answers? If yes, please write these directly on the sheets.

Yes = 0
 No = 6
 Omitted = 2
 Other = 2

Comments

-As the unit is taught, there may be times that changes could come about.

-(In section "GETTING STARTED," Step 3 add the following):

Do you have friends like that? (as third question)

Does Johnny seem to learn from his mistakes? Why does he or doesn't he? (as sixth question)

18. Do you think there should be additions or deletions in ACTIVITY THREE "For Your Information" section? If yes, please write these directly on the sheets.

Yes = 0
 No = 7
 Omitted = 2
 Other = 1

Comment

-Why do teenagers drink? Why do many drink to excess?

19. Were the Process Questions and Answers and ACTIVITY THREE "For Your Information" section valuable for the discussion period, and in covering module objectives? Delete or add any as you think appropriate.

Yes = 7
 No = 0
 Omitted = 2

Comments

-Questions were provocative and answers were easy to follow

20. Was ACTIVITY THREE "For Your Information" informative enough? Delete or add any as you think appropriate.

Yes = 8
 No = 0
 Omitted = 1
 Other = 1

Comment

-This allows students to figure out for themselves what amount of alcohol is safe to consume in a certain period of time.

21. Were the "Information Sheets" for "For Your Information" valuable and informative enough? Did they reinforce the concepts presented in the discussion?

Yes = 9
 No = 0
 Omitted = 1

22. Is there anything missing from the Teacher's Guide that would be helpful in presenting the module? If so, what?

Yes = 0
 No = 6
 Omitted = 3

23. Should anything be deleted from the Guide?

Yes = 0
 No = 8
 Omitted = 2

Questions 24-26 refer to your overall evaluation of the Module

24. How would you characterize the student's reactions to the module on the following 1-5 scale?

TEACHERS' RESPONSES TO QUESTION 24:

RATINGS ON A 1-5 SCALE OF STUDENTS' REACTIONS TO THE MODULE

	1	2	3	4	5	
very interested	3	4				very bored
liked film	8	1				disliked film
information sheets helpful	1	8				information sheets not helpful
participated more than usual		6	3			participated less than usual
liked more than most units	2	6	1			disliked more than most units

NOTE: There was one omission for Question 24.

25. Please indicate how you feel about the total module--film and other activities--in terms of the items below.

TEACHERS' RESPONSES TO QUESTION 25:

RATINGS OF THE MODULE ON A 1-5 SCALE

	Negative 1	2	Neutral 3	4	Positive 5
Overall rating	_____	_____	_____	<u>3</u>	<u>7</u>
Relevance of objectives	_____	_____	_____	<u>4</u>	<u>6</u>
Accuracy of information	_____	_____	_____	<u>1</u>	<u>9</u>
Suitability for 15-16 year olds	_____	_____	_____	<u>2</u>	<u>8</u>

26. Do you believe that the module will have a positive influence on the "drinking and driving, speeding and use of seatbelts" and traffic safety behavior (now or in the future) of the students who took part?

____ Not a bit 4 Probably 3 Definitely yes

THANK YOU

APPENDIX Y
LEADER EVALUATION FORM*

We deeply appreciate your involvement in this effort to develop a valuable educational approach to influencing positively some of the driver attitudes of the new young drivers of our nation, and in the final version of the program we will acknowledge your contribution with sincere thanks. Please print below the exact way in which you would like us to note your cooperation.

NAME _____ GRADE _____

ORGANIZATION _____

CITY _____ STATE _____

1. As you read and use Guidelines for the Use of the Module, please write your comments, additions, and other suggestions for change directly on the margins or between the lines of the pages to which they apply. In addition, please answer the questions on the following pages about the guidelines.
2. Please answer questions 22-24 as well.

*This is the face sheet of the form that was distributed and discussed with each community leader prior to the start of the module. The 24 questions comprising the Leader Evaluation Form and a summary of the responses are found in the following pages of this Appendix.

Community Evaluation Summary (N=6)

(NOTE: One respondent wrote "Yes" for questions 1 and 2 and drew an arrow from the #2 response down through all other questions ending at #21. For questions 3-21 the response is interpreted as "Omitted.")

*Omitted represents the number of leaders who did not give any answer to the question.

**Other represents an answer that did not fit within the established categories; these responses usually took the form of a comment.

1. Does "FOR WHOM IS THIS INTENDED?" give you sufficient information about the purpose of the module? If it does not, state what should be added.

Yes = 6
No = 0

2. Is "HOW ARE RISK ATTITUDES DETERMINED?" clear? If not, how can it be improved?

Clear = 5
Not Clear = 0
Other** = 1

Comment
-Good survey

3. Does "WHY WAS THIS MODULE DEVELOPED?" and why it is being directed toward teenagers come across clearly enough? If not, how can it be improved?

Clear = 4
Not Clear = 0
Omitted* = 1
Other = 1

Comment
-Good description

4. Does "WHERE AND WHEN TO USE THE MODULE" clearly define situations in which it can be used? Are there others which were not listed?

Clear = 4
Not Clear = 0
Omitted = 1
Other = 1

Comment
-Good

5. Do you find any of the "OBJECTIVES" impractical or unrealistic?
If so, which?

Yes = 0
No = 5
Omitted = 1

6. Which of the objectives do you feel is (are) the most important?

<u>Objective</u>	<u>Frequency</u>
2	3
3	2
4	2

Omitted = 1

Comment

-#4 because that should be the ultimate objective

7. Are objectives missing? If so, please state which.

Yes = 1
No = 3
Omitted = 1
Other = 1

Comments

-The objectives you have seen adequate--you should not get too involved with objectives, keep them simple to insure you are making your point.
-Clearly stated and yet vague enough to motivate thought processes with each student.

ACTIVITY ONE "The Young Driver Attitude Scale (YDAS)"

8. Does "WHAT IS THE YDAS" clearly explain the form? If not, how can it be improved?

Clear = 5
Not Clear = 0
Omitted = 1

Comments

-No problem following instructions
-I doubt you will get truly honest answers

9. Is "HOW TO ADMINISTER THE SURVEY" adequately described? If not, how can it be improved?

Yes = 3
 No = 0
 Omitted = 1
 Other = 2

Comments

-No problem

-Just enforce the fact that only honest answers keep the survey valid.

ACTIVITY TWO "Just Another Friday Night"

10. Is the explanation for "PROCESSING OUT" "JUST ANOTHER FRIDAY NIGHT" THROUGH QUESTIONS thorough and clear? If not, how can it be improved?

Clear = 5
 Not Clear = 0
 Omitted = 1

11. Is "Suggested Procedures for the Leader" helpful in preparing for the module? How can it be improved?

Yes = 4
 No = 0
 Omitted = 1
 Other = 1

Comments

-Very good

-Good initial questions should trigger group participation

12. Is "GETTING STARTED" thorough enough? How could it be improved?

Yes = 4
 No = 0
 Omitted = 1
 Other = 1

Comment

-OK

13. Were the activities in logical sequence and easily conducted? How could they be improved?

Yes = 4
 No = 0
 Omitted = 1
 Other = 1

Comments

-OK
 -Good module of instruction

14. What was the most important thing you think participants will learn from the film?

Omitted = 1

Comments

-From discussion, the importance of handling peer pressure.
 -Dangers of drinking and driving. How to identify a risky situation and propose alternatives.
 -Defensive driving. Do not drink and drive.
 -Risks of behavior
 -To think prior to

15. Was there anything omitted in the film which you think should have been included?

Yes = 0
 No = 2
 Omitted = 1
 Other = 3

Comments

-Maybe some actual photos of injured people or fatalities to demonstrate graphically the consequences.
 -Discussion of alternatives, or interventions in risky behavior.
 -Graphic depiction of the injuries to the passengers--I believe in shock value.

16. Was there anything included in the film which you believe should have been omitted?

Yes = 0
 No = 5
 Omitted = 1

Comment

-Good thought provoker--pretty realistic behavior on the part of the kids.

17. Do you think there should be additions or deletions in the Process Questions and Answers? In the "For Your Information" section? If yes, please write these directly on the sheets.

Yes = 0
 No = 5
 Omitted = 1

Comment

-Good job. For your information is also good and thorough.

18. Were the Process Questions and Answers and the "For Your Information" section valuable for the discussion period, and in covering module objectives? Delete or add any as you think appropriate.

Yes = 3
 No = 0
 Omitted = 1
 Other = 2

Comments

-Good
 -Well done

19. Were the "Information Sheets" for "For Your Information" valuable and informative enough? Did they reinforce the concepts presented in the discussion?

Yes = 5
 No = 0
 Omitted = 1

Comments

-Good information
 -Good info

20. Is there anything missing from the Leader's Guide that would be helpful in presenting the unit? If so, what?

Yes = 0
 No = 5
 Omitted = 1

Comment

-Plenty of good material in 2 hours

21. Should anything be deleted from the Guide?

Yes = 0
 No = 5
 Omitted = 1

Questions 22-24 refer to your overall evaluation of the Module

22. How would you characterize the participants' reactions to the module on the following 1-5 scale?

LEADERS' RESPONSES TO QUESTION 22:
RATINGS ON A 1-5 SCALE OF PARTICIPANTS' REACTIONS TO THE MODULE*

	1	2	3	4	5	
very interested		5				very bored
liked film	2	3				disliked film
information sheets helpful	3		2			information sheets not helpful
participated more than usual	2	1	1	1		participated less than usual
liked more than most units	2	2	1			disliked more than most units

*One leader did not respond to Item 22

25. Please indicate how you feel about the total module--film and other activities--in terms of the items below.

LEADERS' RESPONSES TO QUESTION 23:
RATINGS OF THE MODULE ON A 1-5 SCALE

	Negative 1	2	Neutral 3	4	Positive 5
Overall rating	_____	_____	_____	<u>4</u>	<u>2</u>
Relevance of objectives	_____	_____	_____	<u>3</u>	<u>3</u>
Accuracy of information	_____	_____	_____	<u>3</u>	<u>3</u>
Suitability for 15-16 year olds	_____	_____	_____	<u>4</u>	<u>2</u>

26. Do you believe that the module will have a positive influence on the "drinking and driving, speeding and use of seatbelts" and traffic safety behavior (now or in the future) of the students who took part?

_____ Not a bit 5 Probably 1 Definitely yes

THANK YOU

APPENDIX Z

TRAFFIC SAFETY COMMUNICATION RATING SCALE EVALUATION OF
"JUST ANOTHER FRIDAY NIGHT"

MESSAGE

1. The message is clear. The message is unclear.
- +2 15 +1 0 -1 -2
- \$ 100 \$ \$ \$ \$
2. The message is simple. The message is complicated.
- +2 11 +1 4 0 -1 -2
- \$ 73.3 \$ 26.7 \$ \$ \$
3. The message is prominent. The message is lost in side issues.
- +2 10 +1 5 0 -1 -2
- \$ 66.7 \$ 33.3 \$ \$ \$
4. The information is accurate. The information is inaccurate or misleading.
- +2 12 +1 2 0 1 -1 -2
- \$ 80.0 \$ 13.3 \$ 06.7 \$ \$
5. The message is timely. The message is too far ahead of or behind the times.
- +2 12 +1 3 0 -1 -2
- \$ 80.0 \$ 20.0 \$ \$ \$
- Subscore:
- +2 60 +1 14 0 1 -1 -2
- \$ 80.0 \$ 18.7 \$ 01.3 \$ \$
- Mean: 8.933

AUDIENCE

6. The content of the communication is relevant for the audience. The content is unrelated to the needs, problems, or activities of the audience.
- +2 13 +1 2 0 -1 -2
- % 86.7 % 13.3 % % %
7. The language is appropriate for the audience. The language is inappropriate for the audience.
- +2 10 +1 5 0 -1 -2
- % 66.7 % 33.3 % % %
8. The audience can identify with the cultural and social situations depicted. The audience will be unable to identify with the situations depicted.
- +2 7 +1 8 0 -1 -2
- % 46.7 % 53.3 % % %
9. The medium for presenting the communication is appropriate for the audience. The medium is inappropriate for the audience.
- +2 9 +1 5 0 -1 1 -2
- % 60.0 % 33.3 % % 06.7 %
10. The hoped-for response to the communication is realistic for the audience. The hoped-for response is unrealistic for the audience.
- +2 8 +1 5 0 1 -1 1 -2
- % 53.3 % 33.3 % 06.7 % 06.7 %
- Subscore:
- +2 47 +1 25 0 1 -1 2 -2
- % 62.7 % 33.3 % 01.3 % 02.7 %
- Mean: 7.933

COMMUNICATOR

- | | |
|--|--|
| 11. The audience can easily identify with or relate to the communicator. | The communicator is not convincingly related to the message or audience. |
| +2 <u>6</u> +1 <u>9</u> 0 <u> </u> -1 <u> </u> -2 <u> </u> | |
| \$ <u>40.0</u> \$ <u>60.0</u> \$ <u> </u> \$ <u> </u> \$ <u> </u> | |
| 12. The audience will perceive the communicator as credible. | The audience will perceive the communicator as not credible. |
| +2 <u>7</u> +1 <u>8</u> 0 <u> </u> -1 <u> </u> -2 <u> </u> | |
| \$ <u>46.7</u> \$ <u>53.3</u> \$ <u> </u> \$ <u> </u> \$ <u> </u> | |
| 13. The communicator has a high status with the audience. | The communicator has a low status with the audience. |
| +2 <u>8</u> +1 <u>6</u> 0 <u>1</u> -1 <u> </u> -2 <u> </u> | |
| \$ <u>53.3</u> \$ <u>40.0</u> \$ <u>06.7</u> \$ <u> </u> \$ <u> </u> | |
| 14. The communicator shows an attitude of concern for the audience. | The communicator's attitude suggests a lack of concern for the audience. |
| +2 <u>13</u> +1 <u>2</u> 0 <u> </u> -1 <u> </u> -2 <u> </u> | |
| \$ <u>86.7</u> \$ <u>13.3</u> \$ <u> </u> \$ <u> </u> \$ <u> </u> | |
| 15. The communicator's attitude suggests a belief in the message. | The communicator's attitude shows little or no belief in the message. |
| +2 <u>14</u> +1 <u>1</u> 0 <u> </u> -1 <u> </u> -2 <u> </u> | |
| \$ <u>93.3</u> \$ <u>06.7</u> \$ <u> </u> \$ <u> </u> \$ <u> </u> | |
| Subscore: | |
| +2 <u>48</u> +1 <u>26</u> 0 <u>1</u> -1 <u> </u> -2 <u> </u> | |
| \$ <u>83.9</u> \$ <u>34.7</u> \$ <u>01.3</u> \$ <u> </u> \$ <u> </u> | |

Mean: 8.000

TECHNIQUE

16. Repetition reinforces message. The message is not reinforced adequately throughout the presentation.

+2 10 +1 5 0 -1 -2
 \$ 66.7 \$ 33.3 \$ \$ \$

17. The communication is strengthened by visual or other sensory presentations. Sensory presentations are unrelated to the communication or confound it.

+2 9 +1 6 0 -1 -2
 \$ 60.0 \$ 40.0 \$ \$ \$

18. The presentation attracts attention and holds interest. The presentation is dull or boring.

+2 10 +1 5 0 -1 -2
 \$ 66.7 \$ 33.3 \$ \$ \$

19. The technical quality of the presentation enhances the communication. The technical quality of the presentation detracts from the communication.

+2 3 +1 11 0 -1 1 -2
 \$ 20.0 \$ 73.3 \$ \$ 06.7 \$

20. The length is appropriate. The length detracts from the communication.

+2 6 +1 7 0 2 -1 -2
 \$ 40.0 \$ 46.7 \$ 13.3 \$ \$

Subscore:

+2 38 +1 34 0 2 -1 1 -2
 \$ 50.6 \$ 45.3 \$ 02.6 \$ 01.3 \$

Mean: 7.267

OUTCOME

21. The communication clearly presents the benefits of following the suggested action. The benefits of following the suggested action are unclear.
- +2 5 +1 9 0 1 -1 -2
- \$ 33.3 \$ 60.0 \$ 06.7 \$ \$
22. The communicator's attitude and tone encourage the audience to pay attention to the action and outcomes he suggests. The communicator's attitude and tone negatively influence audience attention to his suggestions.
- +2 12 +1 3 0 -1 -2
- \$ 80.0 \$ 20.0 \$ \$ \$
23. The audience will understand the "why," "how," and "when" of the recommended action. The audience will be unsure about what they are expected to do.
- +2 6 +1 8 0 1 -1 -2
- \$ 40.0 \$ 53.3 \$ 06.7 \$ \$
24. The communication arouses feelings likely to produce the expected outcome. The communication fails to arouse feelings likely to produce the expected outcome.
- +2 6 +1 9 0 -1 -2
- \$ 40.0 \$ 60.0 \$ \$ \$
25. The communication is likely to produce the desired results. The communication is unlikely to produce the desired results.
- +2 4 +1 8 0 3 -1 -2
- \$ 26.7 \$ 53.3 \$ 20.0 \$ \$
- Subscore: +2 33 +1 37 0 5 -1 -2
- \$ 44.0 \$ 49.3 \$ 06.7 \$ \$
- Mean: 6.533
- TOTAL SCORE:
- +2 207 +1 130 0 10 -1 3 -2
- \$ 59.1 \$ 37.1 \$ 02.9 \$.009 \$

APPENDIX AA

STUDENT EVALUATION FORM*

The module which you have just completed is being considered for use throughout the United States. We would appreciate your evaluation of the module on these scales.

On the following scale, place an X in the box which describes your response to the module you have just finished.

RESPONSES TO QUESTIONS 1-3 OF THE STUDENT EVALUATION FORM
(OVERALL MODULE EVALUATION) BY TOTAL PERCENTAGE
(N = 318)

	1					
	1	2	3	4	5	
1. very interested	34.0	31.8	26.7	3.5	2.8	very bored
2. participated more than usual	16.7	27.7	36.5	8.5	6.9	participated less than usual
3. liked more than most lessons	38.4	28.0	23.0	4.7	3.1	disliked more than most lessons

Complete the following sentences:

4. As a result of the module, I learned...
5. I would like to have done more in relation to...
6. I didn't like...
7. I would improve the module by...

*This form was given to students at the completion of the module. To save space, the questions on the actual form are interspersed with results of administration.

RESPONSES TO OPEN-ENDED QUESTIONS (ITEMS 4-7) OF THE
STUDENT EVALUATION FORM BY CATEGORY AND PERCENTAGE
(N = 318)

Item	Response Categories	Response %*
*While multiple responses were possible, students almost always gave only one response to each of the questions, 4-7, thus the 100% response total.		
4. As a result of the module I learned...	drinking and driving/BAC/ to think before getting into a car with a drunk driver. to be safe; cautious; careful driving. no comment/not applicable. a lot. about drinking safely. about speeding. about peer pressure while driving. people care about how we drive. about seatbelts. to obey laws of the road. DWI Arrest/Breathalyzer miscellaneous omitted	29.9 13.5 7.2 4.1 2.8 2.2 2.2 0.9 0.9 0.3 0.3 7.2 28.3
5. I would like to have done more in relation to...	no comment/not applicable drinking and driving/DWI arrest/ BAC. more with the film/see other movies discussion/participation. learn more/learn more about driving/ more about laws. effect on the family/saving lives. driving more carefully/having a better attitude. driving while on other drugs/Drugs. consequences. seatbelts. speeding. other (having more realism/information on teens). omitted	12.9 10.7 7.5 4.4 4.1 3.8 2.5 2.2 1.6 0.6 0.0 5.3 44.3
6. I didn't like...	no comment/not applicable everything was good. the movie/parts of the movie. surveys. consequences of DWI/drinking.	17.0 9.7 7.5 6.6 2.2

Item	Response Categories	Response %
6. (continued)	how it was rushed/need more time.	1.9
	seatbelts.	0.9
	lecture of facts.	0.9
	the information on peer pressure.	0.6
	talk more about drugs.	0.3
	demonstration	0.3
	other (information sheets/the whole thing)	5.0
	omitted	46.9
7. I would improve the module by...	no comment/not applicable	11.0
	better film/improve film.	6.9
	not have so many questionnaires [surveys]/change the questions on the survey.	5.3
	more information in certain areas/tell more.	5.3
	have more time.	4.4
	fine as is.	4.1
	have accident victims talk/family effects/more examples like Johnny Miller.	3.8
	more discussion/more hands on.	1.9
	role playing.	0.3
	participant did not respond correctly to the statement (i.e., "not drinking and driving"; "have common sense"; "driving more aware"; "driving safer" "doing traffic stops.")	4.4
	other (i.e., being more interesting; "maybe" section on survey; not doing it; making it for mature people; make different from school lessons; see equipment for DWI)	2.8
	omitted	49.7

Please rate the following activities according to the following scale:

	5 Excellent	4 Good	3 Average	2 Fair	1 Poor
8. Film "Just Another Friday Night"					8. _____
9. Group Discussion					9. _____
10. Information Period (learning about alcohol levels, speeding and seatbelt use)					10. _____
11. Information Sheets (see Table 39)					11. _____

RESPONSES TO QUESTIONS 8-11 OF THE STUDENT EVALUATION FORM
(EVALUATION OF FILM, DISCUSSION PERIOD, INFORMATION PERIOD,
AND INFORMATION SHEETS) BY PERCENTAGE
(N = 318)

		5				
		Poor	Fair	Average	Good	Excellent
	Omitted	1	2	3	4	5
8. Film "Just Another Friday Night"	1.6	2.5	3.1	14.2	39.6	39.0
9. Group Discussion	13.2	2.8	5.3	21.7	39.9	17.0
10. Information Period	0.6	2.5	5.3	23.6	36.8	31.1
11. Information Sheets	12.9	3.5	9.1	23.9	33.3	17.3

12. Do you believe the module will influence your driving behavior towards being safer (now or in the future) in relation to drinking and driving, speeding and seatbelt use?

Note a Bit 7.9% Probably 43.1% Definitely Yes 48.4%

APPENDIX BB
PARTICIPANT EVALUATION FORM*

The module which you have just completed is being considered for use throughout the United States. We would appreciate your evaluation of the module on these scales.

On the following scale, place an X in the box which describes your response to the module you have just finished.

RESPONSES TO QUESTIONS 1-3 OF THE PARTICIPANT EVALUATION FORM
(OVERALL MODULE EVALUATION) BY TOTAL PERCENTAGE
(N = 102)

	%					
	1	2	3	4	5	
1. very interested	28.4	33.3	33.3	2.0	1.0	very bored
2. participated more than usual	14.7	7.8	35.3	27.5	9.8	participated less than usual
3. liked more than most lessons	31.4	27.5	32.4	3.9	1.0	disliked more than most lessons

Complete the following sentences:

4. As a result of the module, I learned...
5. I would like to have done more in relation to...
6. I didn't like...
7. I would improve the module by...

*This form was given to participants at the completion of the module. To save space, the questions on the actual form are interspersed with results of administration.

RESPONSES TO OPEN-ENDED QUESTIONS (ITEMS 4-7) OF THE
PARTICIPANT EVALUATION FORM BY CATEGORY AND PERCENTAGE
(N = 102)

Item	Response Categories	Response %*
*While multiple responses were possible, with rare exception, students gave only one response to each of the questions, 4-7, thus the 100% response total.		
4. As a result of the module I learned...	drinking and driving/BAC/ to think before getting into a car with a drunk driver. DWI Arrest/Breathalyzer to be safe; cautious; careful driving. no comment/not applicable. about seatbelts. a lot. about peer pressure while driving. about drinking safely. people care about how we drive. miscellaneous omitted	21.6 8.8 5.9 2.0 2.0 1.0 2.0 1.0 1.0 4.9 50.0
5. I would like to have done more in relation to...	drinking and driving/DWI arrest/ BAC. no comment/not applicable. discussion/participation. more with the film/see other movies. effect on the family/saving lives. learn more/learn more about driving/ more about laws. driving while on other drugs/Drugs. miscellaneous (having more realism/ information on teens omitted	13.7 12.7 4.9 3.9 2.9 1.0 1.0 5.9 53.9
6. I didn't like...	no comment/not applicable everything was good. the movie/parts of the movie. surveys. demonstration. consequences of DWI/drinking. how it was rushed/need more time. lecture of facts. the information on peer pressure. miscellaneous (information sheets/ the whole thing) omitted	14.7 8.8 4.9 3.9 2.0 1.0 1.0 1.0 3.9 57.8

Item	Response Categories	Response %
7. I would improve the module by...	no comment/not applicable	7.8
	more information in certain areas/ tell more.	6.9
	more discussion/more hands on.	5.9
	fine as is.	5.9
	better film/improve film.	3.9
	have more time.	3.9
	have accident victims talk/family effects/more examples like Johnny Miller.	2.9
	participant did not respond correctly to the statement (i.e., "not drinking and driving"; "have common sense"; "driving more aware"; "driving safer" "doing traffic stops.")	1.0
	other (i.e., being more interesting; "maybe" section on survey; not doing it; making it for mature people; make different from school lessons; do not do the [DWI] demonstration; see equipment for DWI)	3.9
	omitted	57.8

Please rate the following activities according to the following scale:

	5 Excellent	4 Good	3 Average	2 Fair	1 Poor
8. Film "Just Another Friday Night"					8. _____
9. Group Discussion					9. _____
10. DWI Arrest					10. _____
11. Information Period (learning about alcohol levels, speeding and seatbelt use)					11. _____
12. Information Sheets (see Table 39)					12. _____

RESPONSES TO QUESTIONS 8-11 OF THE STUDENT EVALUATION FORM
(EVALUATION OF FILM, DISCUSSION PERIOD, INFORMATION PERIOD,
AND INFORMATION SHEETS) BY PERCENTAGE
(N = 102)

		Poor	Fair	Average	Good	Excellent
	Omitted	1	2	3	4	5
8. Film "Just Another Friday Night"	0.0	0.0	3.9	14.7	45.1	36.3
9. Group Discussion	1.0	9.8	11.8	22.5	38.2	16.7
10. DWI Arrest	2.0	1.0	9.8	10.8	46.1	30.4
11. Information Period	4.9	0.0	5.9	21.6	38.2	29.4
12. Information Sheets	80.4*	1.0	0.0	5.9	8.8	3.9

13. Do you believe the module will influence your driving behavior toward being safer (now or in the future) in relation to drinking and driving, speeding and seatbelt use?

Note a Bit 3.9% Probably 51.0% Definitely Yes 44.1%

*were unavailable or not distributed in most places.

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